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Gridded Annual Pollutant Emissions East of the Rocky Mountains

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Gridded Annual Air Pollutant Emissions East of the Rocky Mountains

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EAST OF THE ROCKY MOUNTAINS

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AUTHORS' AFFILIATION

The author is on assignment with the U.S. Environmental Protection Agency from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

ABSTRACT

Annual pollutant emissions of particulates, sulfur dioxide, nitrogen oxides, hydrocarbons, and carbon monoxide from point and area sources are apportioned to 80-km grid squares on a 35 by 30 grid network. The grid network is a polar stereographic projection true at 60°N. The domain of the network includes southern Canada and much of the United States east of the Rocky Mountains. Southern Texas and northern New England are omitted.

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SECTION I

INTRODUCTION

The desire to study the effects of long-range transport of pollutants in the United States on local air quality and to identify source regions contributing to deteriorated air quality created the need for long-range and regional-scale air quality simulation models. This in turn brings about the need for gridded pollutant emissions. The models and gridded pollutant emissions are essential tools in studying transport and transformation of pollutants as well as surface deposition.

Numerous modeling efforts incorporating gridded pollutant emissions have been compiled in Europe and the United States. Johnson, et al.¹ used the annual sulfur dioxide emissions inventory compiled by Rystad, et al.² to create gridded emission maps with grid dimensions of 0.5 degree latitude and 1.0 degree longitude. They developed a model to assess the impact of emissions from individual nations in western and central Europe. Bolin and Persson³ developed a regional sulfur dispersion and deposition model for western Europe using a non-uniform emissions grid created from the same inventory. Sheih⁴ used the sulfur dioxide emissions inventory for power plants compiled by the Federal Power Commission to model sulfur pollution over the northeastern United States. Other modeling efforts utilizing gridded emission are summarized by Liu and Durran⁵.

To provide emissions data for air quality studies, the United States Environmental Protection Agency maintains a comprehensive inventory of annual anthropogenic emissions (from hereon, referred to as annual emissions) of five pollutants - particulates, sulfur dioxide, nitrogen oxides, hydrocarbons, and carbon monoxide. In addition, the Ontario Ministry of the Environment and the Canadian counterpart of the EPA, Environment Canada, maintain similar emission inventories.

From these emission inventories, gridded emission maps were created for the United States and Canada east of the Rocky Mountains. For large-scale air quality studies, the five pollutants were apportioned onto a uniform grid network with an 80-km grid spacing. (From here on, this network will be referred to as the 80-km grid network). For regional-scale modeling of the northeastern United States, the five pollutants were apportioned onto uniform grid networks with a 20-km grid spacing. (From here on, this grid network will be referred to as the 20-km grid network). These emission grids were designed as input data to specific air quality simulation studies, but it is hoped the gridded emissions presented here will be beneficial for other studies.

The pollutant emission inventories for the United States and Canada will be discussed in Section 2. The 80-km emission grids for the United States and southern Canada east of 105 degrees West and 20-km emissions grids for the northeastern United States and southeastern Ontario will be presented and discussed in Section 3. Data helpful to air quality simulation modelers are contained in the numerous appendices.

SECTION 2
POLLUTANT EMISSION INVENTORIES
UNITED STATES NATIONAL EMISSIONS DATA SYSTEM (NEDS)

In 1970 an amendment to the Clean Air Act passed by Congress required the individual state governments to compile, maintain, update, and submit to the Federal Government an annual pollutant emission inventory of point sources. Point sources are defined as stationary sources with the potential of emitting at least 100 tons per year of any of five primary criteria pollutants. The five criteria pollutants are particulates, sulfur dioxide, nitrogen oxides, hydrocarbons, and carbon monoxide. Potential emissions are defined to be the emissions from a source after the air pollution control equipment was removed or deactivated. The data were intended to be used to assess, at the local and state levels, the impact of source emissions on an area's air quality.

Emissions data from those sources not classified as point sources are contained in the NEDS area source inventory. These sources include mobile sources and stationary sources individually emitting less than 100 tons per year, but collectively, emitting a significant amount. Miscellaneous sources, such as, forest fires and agricultural burning are also included in the area source file.

United States Point Source Inventory

Since 1971 the National Air Data Branch (NADB) of the EPA Office of Air Quality Planning and Standards (OAQPS), via the ten EPA Regional Offices, has maintained and analyzed point source emissions data compiled by the state air pollution agencies. Originally, the data submitted by the states were converted to a uniform format by EPA internal and contractual efforts and stored into the newly created National Emissions Data System (NEDS). Now, however, much of the data have been submitted in a uniform format.

As of December 1977, NEDS contained approximately 200,000 United States point source records. Data in these records include, but are not limited to, the following:

- a. Location of source (state, county, air quality control region, UTM coordinates)
- b. Stack parameters (stack height, stack diameter, flow rate, temperature of the exhaust)
- c. Normal operating schedule (seasonal, days per week, hours per day)
- d. Annual emissions of the five primary pollutants
- e. Pollutant control information
- f. Pollutant control efficiency estimates.

Details of the contents of NEDS are furnished in "Guide For Compiling a Comprehensive Emissions Inventory"⁶.

The annual emissions from point sources have been determined from a method employing one of the following:

- a. Stack test results or other emission measurements
- b. Material balance using engineering knowledge and expertise of process
- c. Emission factors from "Compilation of Air Pollution Emission Factors"⁷
- d. Guess.

It is required that some of these point source emission rates be updated semi-annually by the state agencies. The update requirement applies to the following point sources:

- a. Those achieving final compliance with a state implementation plan, emission limitation regulation, or strategy
- b. New or modified sources receiving approval to begin construction or operation
- c. Those terminating operations during a reporting period.

More details concerning emission estimation procedures and reporting requirements can be found in "AEROS Manual Series", Vol. 1⁸.

United States Area Source Inventory

Since the 1970 Clean Air Act Amendments did not require the states to compile and submit an area source inventory, the EPA and EPA contractors compiled area source inventories for each state. Due to the large number of area sources, the compilation and storage of data pertaining to individual area sources would not be practical. As an alternative, annual emissions from these sources in each of the approximately 3100 United States counties or county-equivalents are summed and stored in NEDS county-wide records.

Each area source record includes, but not limited to, the following:

- a. Location (state and county only)
- b. Estimated annual emissions from county sources
- c. Quantity of fuels burned for residential, commercial, and industrial heating and transportation
- d. Number of vehicle-miles traveled
- e. Population data

No coordinates whatsoever were included in the area source records.

Emissions from area sources were estimated from emission factors and data compiled by county, state, and federal agencies. The compiled data included vehicle-miles traveled, fuel retail sales records, fuel evaporative losses, population statistics, acreage of forests burned, etc. For details, see "Guide For Compiling a Comprehensive Emissions Inventory"⁶.

Every year the EPA-NADB updates the NEDS area source emissions inventory either by estimating area source emissions from updated information gathered from various governmental agencies or accepting emissions estimates voluntarily submitted to EPA by the state agencies. These state-submitted data are reviewed by EPA for accuracy and completeness. Care is taken to avoid duplicating emissions data reported in the point source inventory. Upon final acceptance, the data are included in the NEDS area source emissions file.

ONTARIO POLLUTANT INVENTORY SYSTEM (OPIS)

As early as 1969 the Ontario Ministry of the Environment began to conduct detailed emission surveys in large urban areas in the province⁹. First, a comprehensive inventory was compiled for the city of Toronto. The compilation of comprehensive inventories for Hamilton and the Niagara Peninsula followed. In addition to area source data, these inventories included data from point sources, which were defined as stationary sources emitting at least 100 pounds per day of any of the five criteria pollutants.

Prior to the delivery of the inventories to EPA, industrial emissions data for the southeastern, northeastern, and western regions of Ontario were added to the inventory. Plans for the future included the completion of the inventory in these areas.

Since the annual emissions of pollutants from the industrial areas of Ontario north of Lakes Superior and Huron were not furnished in this inventory, total annual emission estimates were obtained for 1973 from the Wawa, Sudbury, Thunder Bay, and Sault Ste. Marie areas from another data source¹⁰. The pollutants from this data source only included particulates, sulfur dioxide, and nitrogen oxides, however. These total emissions were assumed to be point source emissions and added to the Ontario point source emission file.

Ontario Point Source Inventory

The OPIS point source inventory basically contains the same type of information in each of the 800 source as the records in the NEDS point source file. However, the Ontario inventory includes more detailed information concerning normal plant operations. The specific days of the week and diurnal variations of normal plant operations are included.

Essential plant operations data first were gathered by inspectors and engineers from the Regional Offices via personal contacts with plant managers. The basic data collected in the surveys were reviewed for accuracy and validity. Upon acceptance of the data, realistic emission estimates were derived by applying engineering knowledge and judgement to the type of technology, fuel, and operating and maintenance conditions of the source. Emission factors detailed in "Compilation of Air Pollutant Emission Factors"

were used when needed. Field-measured emissions and not emissions estimates were recorded when available.

Emissions data for new sources or modifications of existing sources are supplied to emissions inventory personnel from completed construction or modification approval applications. Other changes, such as, fuel switches and modification of manufacturing processes are updated by periodic source surveys conducted by Regional Officers. The periodic surveys are conducted every one or two years for each source depending upon the amount of emissions released from the source.

Ontario Area Source Inventory

In contrast to the similarities of the Ontario and United States point source inventories, the contents of the Ontario area source inventories are much different than the contents of the United States area source inventory. The records in the Ontario area source inventory contain emission estimates from all area sources within 1-km grid squares, where emissions from the United States area sources are summed for each county. Geographical coordinates, accurate to 1.0 km, are included in the 16000 Ontario area source records, while none are given in the United States area source records.

Another difference lies in the contents of the records of each inventory. Only the emissions estimates, normal diurnal emissions pattern, source location, and source description are supplied in OPIS. The NEDS area source records contain more information, however, over a much larger area.

In OPIS, the emissions from area sources were estimated in a similar fashion to those in NEDS. Automobile emissions were estimated by applying emission factors to fuel sales records and traffic flow records compiled by the Ministry of Transportation and Communication. Similarly, emissions from small industrial and commercial complexes were estimated from fuel consumption rates obtained from individual telephone contacts.

Emissions resulting from residential heating were estimated from fuel-sales records. Land-use and population distribution information were used to apportion the emissions to 1-km grid squares.

SASKATCHEWAN AND MANITOBA EMISSIONS INVENTORIES

In late 1976, annual emissions estimates for sources in Saskatchewan and Manitoba were obtained from Environment Canada. At the time the emissions data were requested, Environment Canada was in the process of accumulating, processing, and storing emissions data in the computerized National Emissions Inventory System¹¹. As a result, such details as stack data and normal plant operation schedules for point sources were not available. Moreover, the annual emissions estimates were manually tabulated.

Because of the incompleteness of the system, no specific location of the source was furnished as in the data received from the Ontario Ministry of the Environment. Instead, the total emissions from point sources in each major urban area, as well as, the general coordinates of the urban area were furnished.

Area source emissions from sources in the area of interest, defined later, were estimated by Environment Canada to be 20% of the total area source emissions in each of the two provinces. In some cases, emissions from sources classically defined as point sources were included in the area source emissions table when site location information was unavailable.

SECTION 3

ANNUAL EMISSION GRID MAPS

In order to simulate air quality, emissions input data must be available and utilized. Emission rates apportioned to a uniform grid would be the most suitable form of emissions data input for numerical modeling purposes. The dimension of these grid squares would, of course, be dependent upon the particular horizontal scale of interest.

Since emission rates from sources fluctuate seasonally and annually, ideally the time period when the emissions were estimated should correspond to the time period the modeler chooses to simulate air quality. Unfortunately, comprehensive emission inventories for widespread time periods and extensive areas do not exist. The maintenance requirements would be impractical. Updated information constantly replaces emissions data stored in the inventories.

Much of the point source emissions data in NEDS for some states has not been updated since 1973, however. Appendix A indicates by state the percentage of point source records entered or updated in NEDS for each year. The years range from 1969 to 1977. Most of the point source records were entered in NEDS around 1973.

Two sets of annual emission grids of particulates, sulfur dioxide, nitrogen oxides, hydrocarbons, and carbon monoxide are presented in this section. Ten uniform emission grids are contained in each set--five point and five area source emission grids. In addition, the grid configurations and gridding procedures are discussed.

The first set of emission grids presented have a grid spacing of 80-km and a domain covering a large portion of the United States and southern Canada east of 105 degrees west longitude. These emission grids would be optimal for large-scale air quality simulations.

The source emission grids in the second set have a grid spacing of 20-km. The domain of the grid network in this set extends from Columbus, Ohio to Portland, Maine and Richmond, Virginia to Ottawa, Ontario. These emission grids would be useful for regional-scale air quality simulations in the northeastern United States.

The two emission grid configurations and the figures and appendices in which they appear are summarized in Table 1.

ANNUAL EMISSION GRIDS FOR LONG-RANGE AIR QUALITY SIMULATION STUDIES

Configuration of the United States-Canadian Grid Network

For the study of long-range transport, transformation, and deposition of pollutants, emission grids with a grid spacing of approximately 80-km were created for point and area sources. The domain includes southern Canada and the United States east of 105 degrees with the exception of southern Texas and much of northern New England. The southeastern corner of Saskatchewan and the southern portions of Manitoba and Ontario have been included also. These areas contain the majority of both Canadian population and industrial areas.

The 35 by 30 grid network with an 80-km spacing is identical to that utilized by the prognostic Planetary Boundary Layer Model developed by Schaffer and Long¹². The map is based upon a polar stereographic projection true at 60 degrees North and parallel to 105 degrees West.

Procedure for Gridding Emissions Onto the 80-km Grid Network

Annual Point Source Emissions--

The design of the emissions gridding procedure was dictated by the data content of each emission inventory utilized. The apportionment to grid squares of annual emissions from Ontario point and area sources and most of the United States point sources was rather straightforward. Every source documented in OPIS included a complete set of UTM coordinates (UTM zone, UTM-east, and UTM-north) identifying the location. A computer program, listed in Appendix B, was written and used to convert the UTM coordinates to latitude and longitude (UTMC), while another (CONVB) was written to convert latitude and longitude to grid coordinates. Total annual emissions

TABLE 1. SUMMARY OF THE EMISSION GRID NETWORKS

Grid Spacing	Grid Configuration	Number of Grid Squares	Geographical Domain	Type of Source Emissions	Figures	Appendices
80 km	35 by 30	1050	Most of U.S. and Southern Canada east of the Rockies	Point Area	1-5 6-10	D D
20 km	40 by 40	1600	Columbus, Ohio to Portland, Me. and Richmond, Va. to Ottawa, Ont.	Point Area	12-16 17-21	E E

from Ontario point and area sources were allocated to the grid squares in which the sources were located.

Problems surfaced during the apportionment of United States point source emissions to grid squares. First of all, as of late 1977, 19.3% of the NEDS records of point sources within the grid domain contained incomplete sets of UTM coordinates. Nearly all the point source records for Kansas did not include coordinates. Furthermore, an additional 2.3% of these point source records contained UTM coordinates with significant errors. Appendix C summarizes by state the number and percentage of point source records with site coordinates missing or in error.

For these point source records, the gridding procedure was designed to specify the location of the source at the geographical center of the county in which it was located. With this specification and an 80-km grid spacing, it is possible that the emissions from these point sources actually, but unknowingly, located within one grid square could be apportioned to an adjacent grid square.

Annual Area Source Emissions--

A similar procedure was adopted to allocate United States area source emissions. Since the NEDS data records for area sources contained total emissions for entire counties, these emissions were allocated to the grid square containing the approximate geographical center point of the respective county. The emissions from any given county were always allocated to one grid square. This resulted in a few grid squares showing no area source emissions, unfortunately. Another drawback was the fact that the emissions from primarily large urban areas (Chicago, Detroit, and New Orleans) could be allocated to the adjacent grid square containing the geographical center of the county. In these three cases, the area source emissions were allocated to the grid squares containing the urban area.

The procedure for apportioning annual emissions from point sources in Saskatchewan and Manitoba involved allocating the emissions to grid squares containing the urban centers in which the sources were located. Emissions from area sources in the two provinces, on the other hand, were apportioned to grid squares based upon the assumption that emissions from area sources are proportional to population density. The population in each grid

square in Saskatchewan and Manitoba was estimated using an international Atlas. The emissions apportioned to each grid square depended upon the percentage of population in the grid square.

Discussion of 80-km Emission Grids

The annual emissions for the 80-km grid are presented in two formats. First, the actual annual emissions from sources within each grid square are listed in Appendix D. These values are intended for direct input to air quality simulation models. The emission rates in the appendix are listed first for the grid square in the lower-left corner of the grid network (1,1). The emission rates from sources in the remaining grid squares in the bottom row follow. The rates from sources in the remaining rows are listed from the bottom to the top of the grid network.

Secondly, Figures 1-10 illustrate the relative magnitude of the annual point and area source emissions of the five criteria pollutants in each grid square. From the figures, high emission areas of the two countries are readily identified.

The areas of the United States and Canada where emissions are greatest are indicated by the presence of single-digit numbers in the grid squares. As indicated by the key in each figure, the higher the single-digit number, the greater the emissions from the sources within the grid square. Those grid squares with no numbers indicate the annual emissions of the pollutant from sources within the grid square are less than the minimum rate indicated in the key. Except for the 60,000 tons per year rate for the area source emissions map for carbon monoxide, the minimal value is 20,000 tons per year.

Point Source Emission Maps--

In the ensuing discussion, areas of Canada and the United States emitting the largest quantities of pollutants within the grid domain will be identified. The estimated annual emissions from individual point sources, as well as, the source classification (see Appendix A of "Guide for Compiling a Comprehensive Emission Inventory"⁶ for a complete list) have been obtained directly from the emission inventories. The annual national emissions, as well as, information concerning source classifications of area sources in

the United States were obtained from "1973 National Emissions Report"¹³.

Figure 1 illustrates the grid map of particulates emissions from point sources. Most of the point source emissions of this pollutant in the United States result from the burning of bituminous coal for electric generation (55% of the annual national total). Nearly 20% is attributed to the mineral products industry and 16% to the primary metals industry.

The areas where the largest quantities are emitted annually include the extreme northeastern corner of Alabama, western Pennsylvania, eastern Ohio, and southeastern Indiana where electric generating plants burn bituminous coal. Industrial boilers in eastern Pennsylvania also burn large quantities of bituminous coal and emit large quantities of particulates each year. Aluminum production near New Orleans, mineral production in southeastern Kentucky, and stone excavation in northern Kentucky are reportedly responsible for the high particulates emission in those areas.

The sulfur dioxide emission map illustrated in Figure 2 shows areas where large quantities of fossil fuels are burned from point sources. The point source class emitting the greatest amount of this pollutant annually - nearly 57% of the national total - is the bituminous coal-fired electric generating plant. The primary metals industry emits nearly 12%, while nearly 7% of the total annual emissions of the pollutant result from the burning of bituminous coal for industrial fuel. The petroleum industry emits about 4% of the national total each year.

The largest single emitter of sulfur dioxide is a smelter in Sudbury, Ontario where the estimated point source emissions exceed one million tons. The large emissions observed in southwestern Pennsylvania are attributed to coal-fired electric generating plants.

In the Midwest, point source emissions of sulfur dioxide are high near the cities of Gary, Toledo, Detroit, and Cleveland. The emissions are also high along the Mississippi River from St. Louis to Cairo, Illinois and along much of the Illinois and Ohio Rivers. The highest emission rates in the East are attributed to coal-fired electric generating plants in southeastern Pennsylvania and the petroleum industry in northern Delaware.

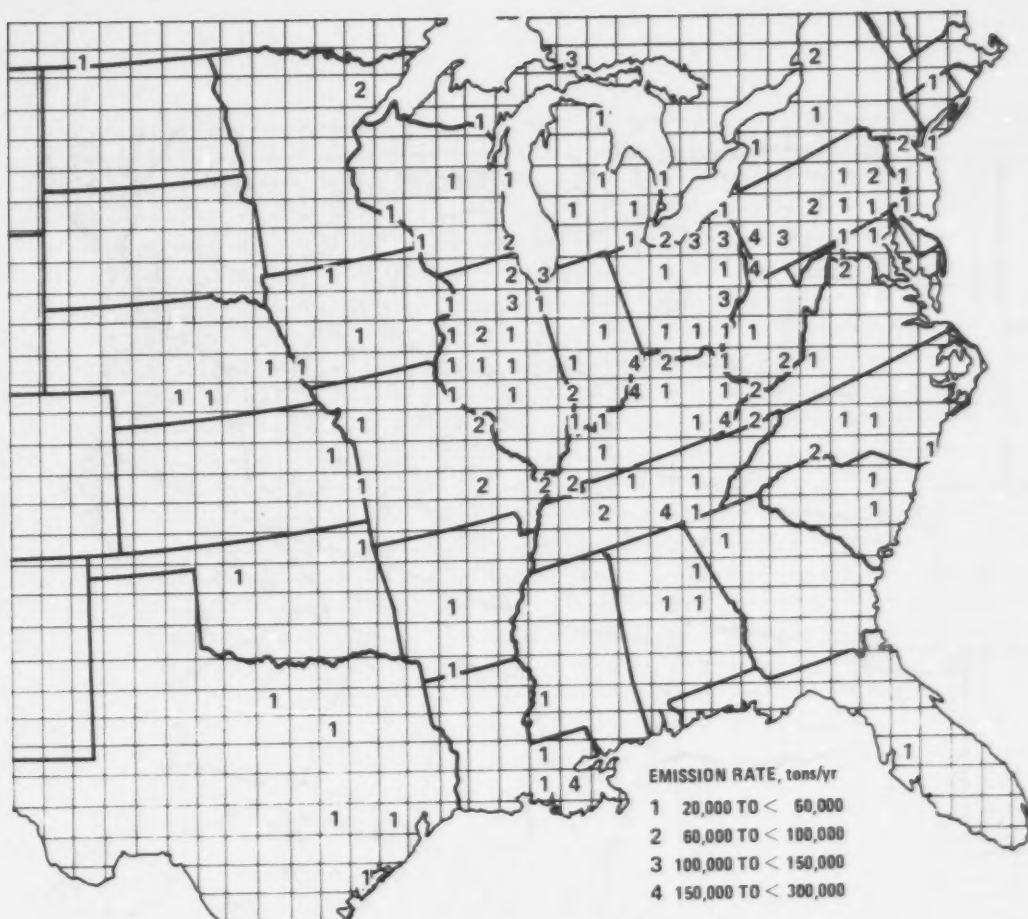


Figure 1. Gridded annual point source emissions (tons/year) of particulates for the U.S. and Canada (80-km grid).

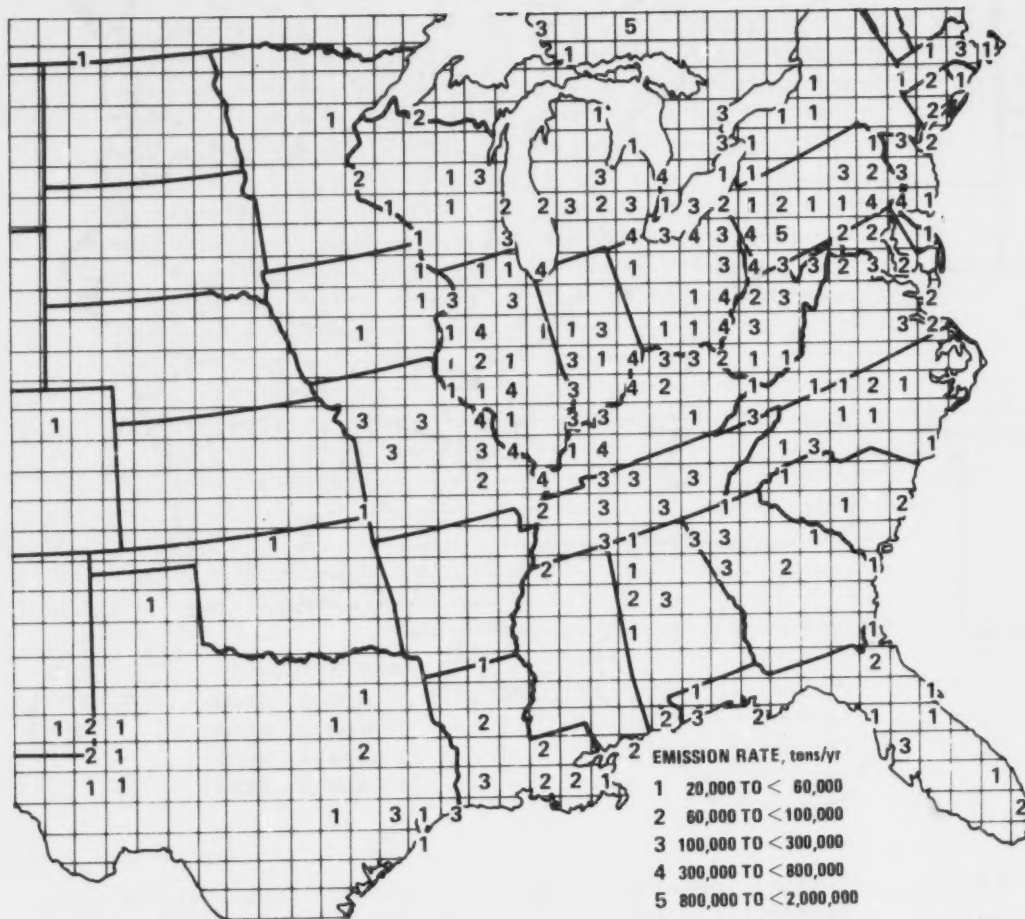


Figure 2. Gridded annual point source emissions (tons/year) of sulfur dioxide for the U.S. and Canada (80-km grid).

Figure 3 depicts the nitrogen oxides emissions from point sources. These emissions result primarily from the burning of bituminous coal, residual oil, and to a lesser extent, natural gas east of the Mississippi River. On the other side of the river, the emissions primarily are caused by the burning of natural gas and bituminous coal. Nationally, nearly 70% of the point source emissions of nitrogen oxides result from the process of generating electricity (about 45% from burning bituminous coal, 12% from natural gas and 10% from residual oil). Another 20% is attributed to the burning of fuel for industrial use.

Point sources in the grid square containing the Gary, Indiana metropolitan area emit more nitrogen oxides (approximately 430,000 tons/year) than the point sources in any other grid square. These emissions result largely from the generation of electricity for industrial use. Other areas where point source emissions are high are west central Illinois and the Pittsburgh and New York metropolitan areas.

Figure 4 illustrates areas where annual point source emissions of hydrocarbons are greatest. These emissions primarily result from evaporative losses of solvents used in industrial processes and petroleum products during the manufacturing, storing, and transporting processes. Nearly 50% of the annual national point source emissions of hydrocarbons is due to evaporative losses, while 25% is attributed to chemical manufacturing processes.

The greatest emissions of the pollutant are from sources located in or near large metropolitan areas where the refining and consumption of the products are greatest. Southwestern New Jersey, extreme southeastern Texas, and the Houston areas contain the largest point sources.

The final point source emission map, illustrated in Figure 5, shows the areas where annual carbon monoxide emissions are the greatest. The release of carbon monoxide results in the incomplete burning of fossil fuels and other materials containing carbon. Nationally, about 30% of the total annual point source emissions of the pollutant is attributed to the petroleum industry, 25% to the chemical manufacturing industry (largely from the production of carbon black), 17% to the primary metal industry, and 8% to the secondary metals industry.

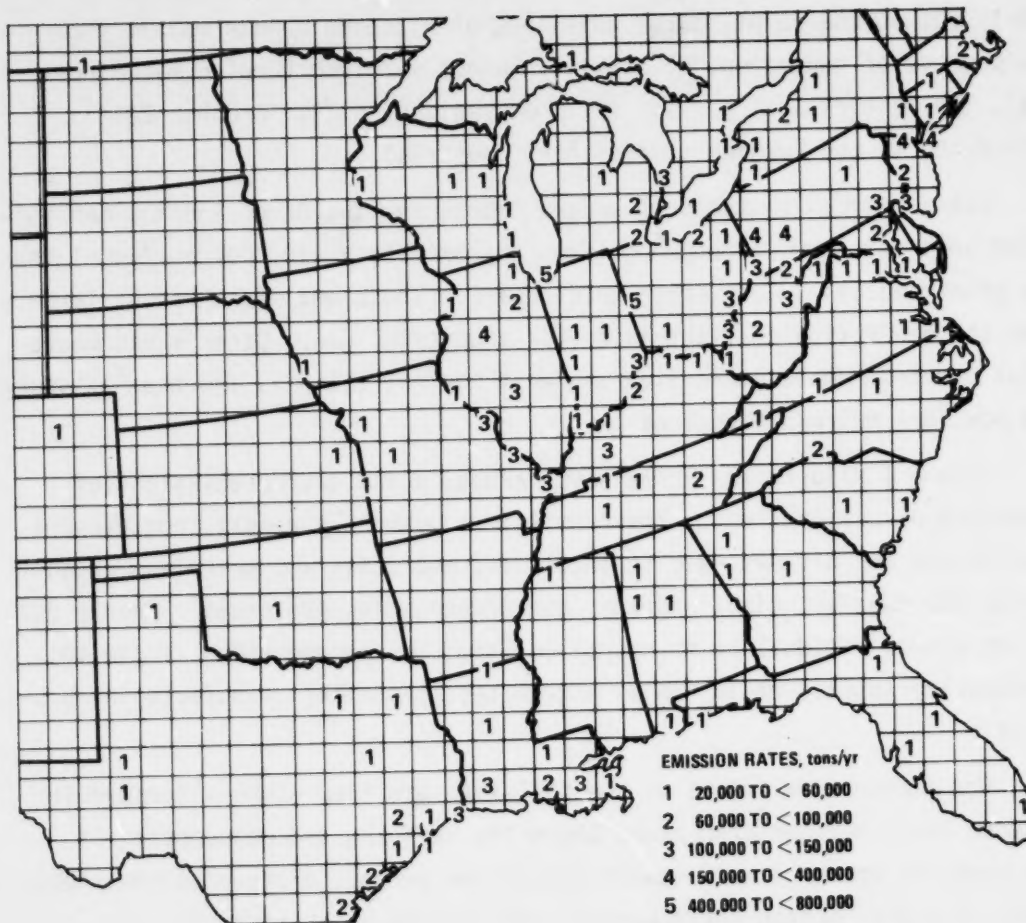


Figure 3. Gridded annual point source emissions (tons/year) of nitrogen oxides for the U.S. and Canada (80-km grid).

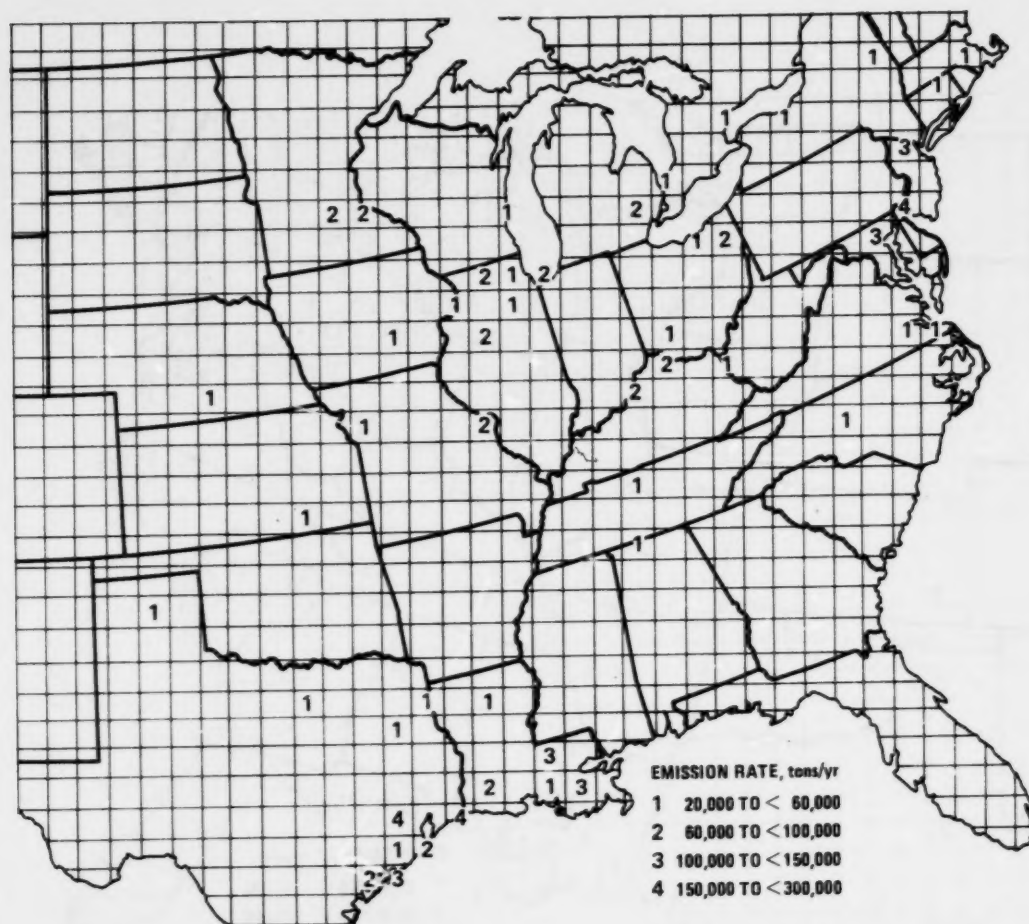


Figure 4. Gridded annual point source emissions (tons/year) of hydrocarbons for the U.S. and Canada (80-km grid).

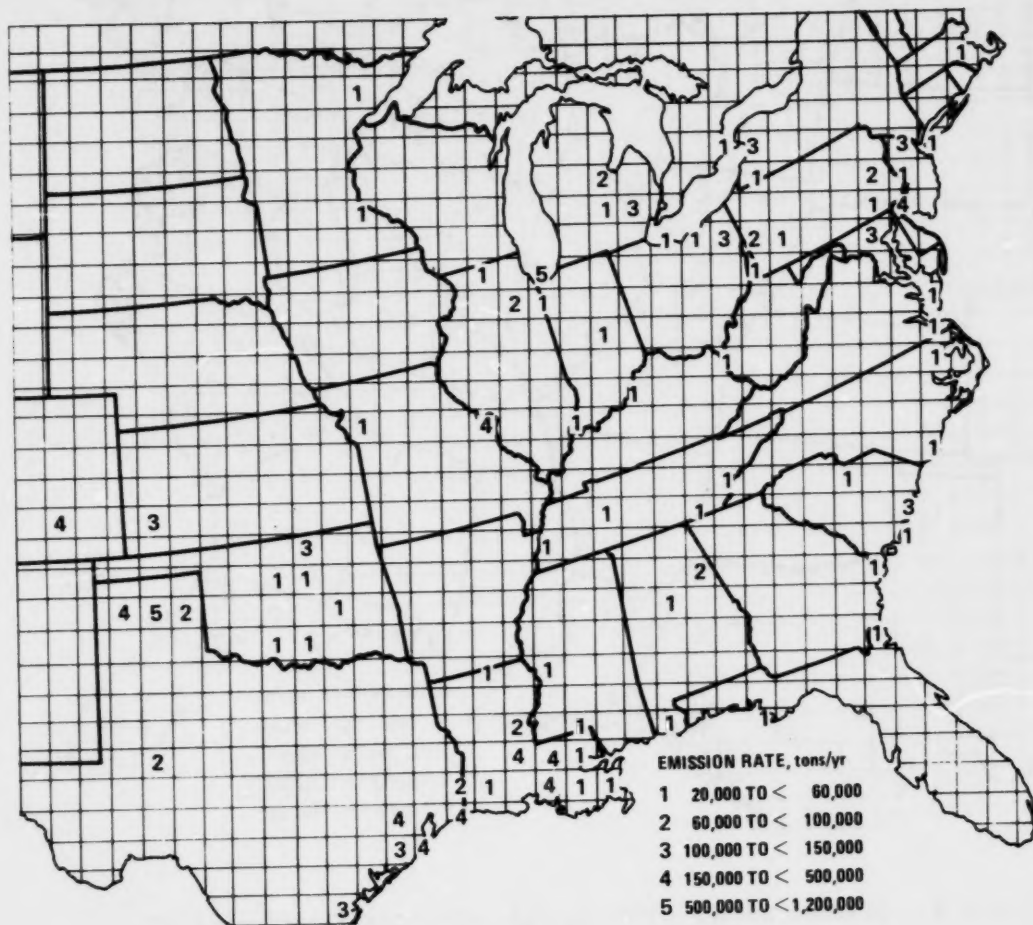


Figure 5. Gridded annual point source emissions (tons/year) of carbon monoxide for the U.S. and Canada (80-km grid).

The point sources in Gary, Indiana emit over one million tons of carbon monoxide each year. Much of this is emitted by the primary metals and petroleum industries. Meanwhile, the chemical manufacturing and petroleum industries annually emit nearly 700,000 and 100,000 tons of carbon monoxide, respectively, in the Amarillo, Texas area.

Area Source Emission Maps--

Figure 6 shows areas where annual area source emissions of particulates are greatest. These sources, concentrated around large metropolitan areas, include mobile sources and small stationary sources collectively, but not individually, emitting relatively large amounts of the pollutant. It can be seen from the comparison of Figures 1 and 6 most of the particulates emissions result from point sources.

The "1973 National Emissions Report" can be used to identify the types of area sources responsible for the majority of the pollutant emissions. For instance, in the Cleveland-Akron area, 79% of the area source emissions of particulates result from the burning of bituminous coal for industrial fuel and another 8% from land vehicle exhaust. In the Gary, Indiana area, 43% of the area source emissions of the pollutant result from the burning of bituminous coal for industrial fuel, while 25% is attributed to land vehicle exhaust and another 16% to solid waste disposal.

In New York City the largest single contributor to the area source emissions is the burning of residual oil for residential, industrial, and commercial space heating (32%). Meanwhile, 26% is attributed to land vehicle exhaust and 16% to solid waste disposal.

In nearby northern New Jersey almost 40% of the area source emissions of the pollutant is attributed to land vehicle exhaust. In addition, 22% is attributed to solid waste disposal and 22% to the burning of distillate oil for residential, industrial, and commercial fuel.

Figure 7 illustrates the area source emissions of sulfur dioxide. Like the emissions of particulates, the sulfur dioxide is emitted largely from point sources. Area sources of sulfur dioxide are concentrated in the highly industrialized and populated Midwest and Northeast. This includes Gary, Indiana, the Cleveland-Akron-Youngstown area, northern New Jersey, and New York City.

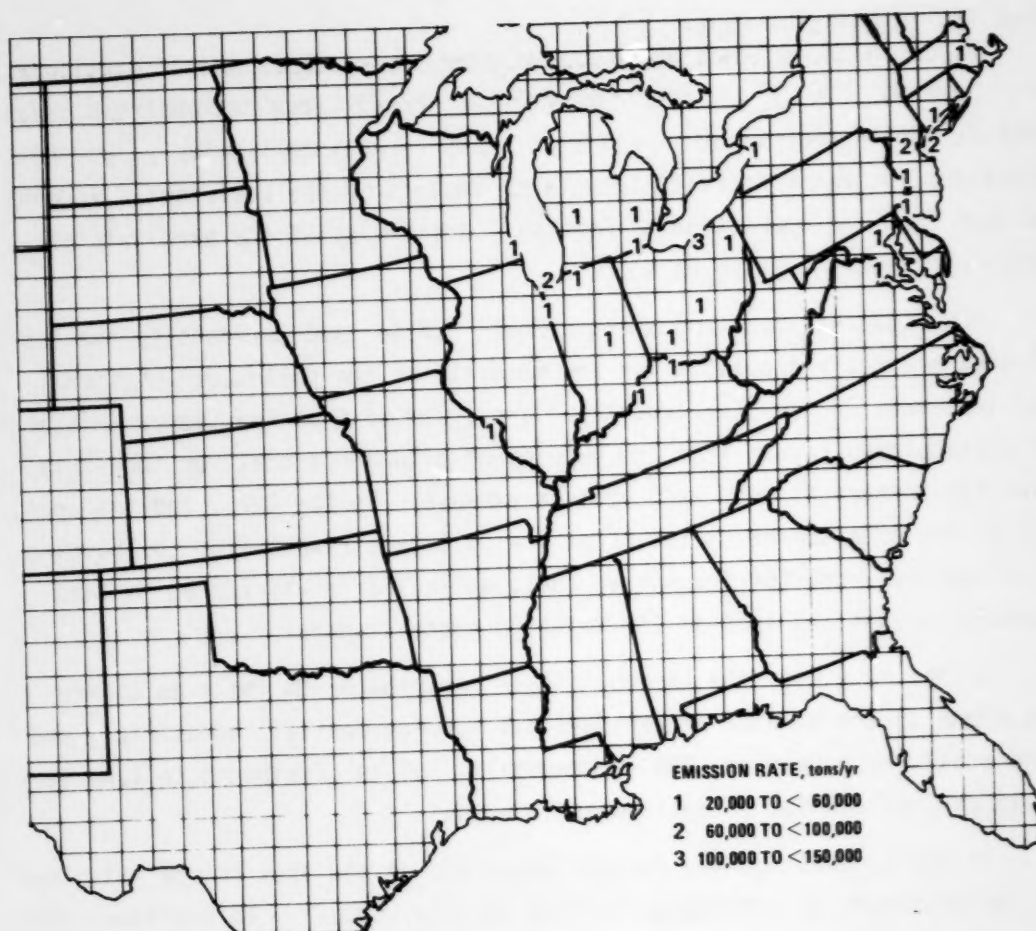


Figure 6. Gridded annual area source emissions (tons/year) of particulates for the U.S. and Canada (80-km grid).

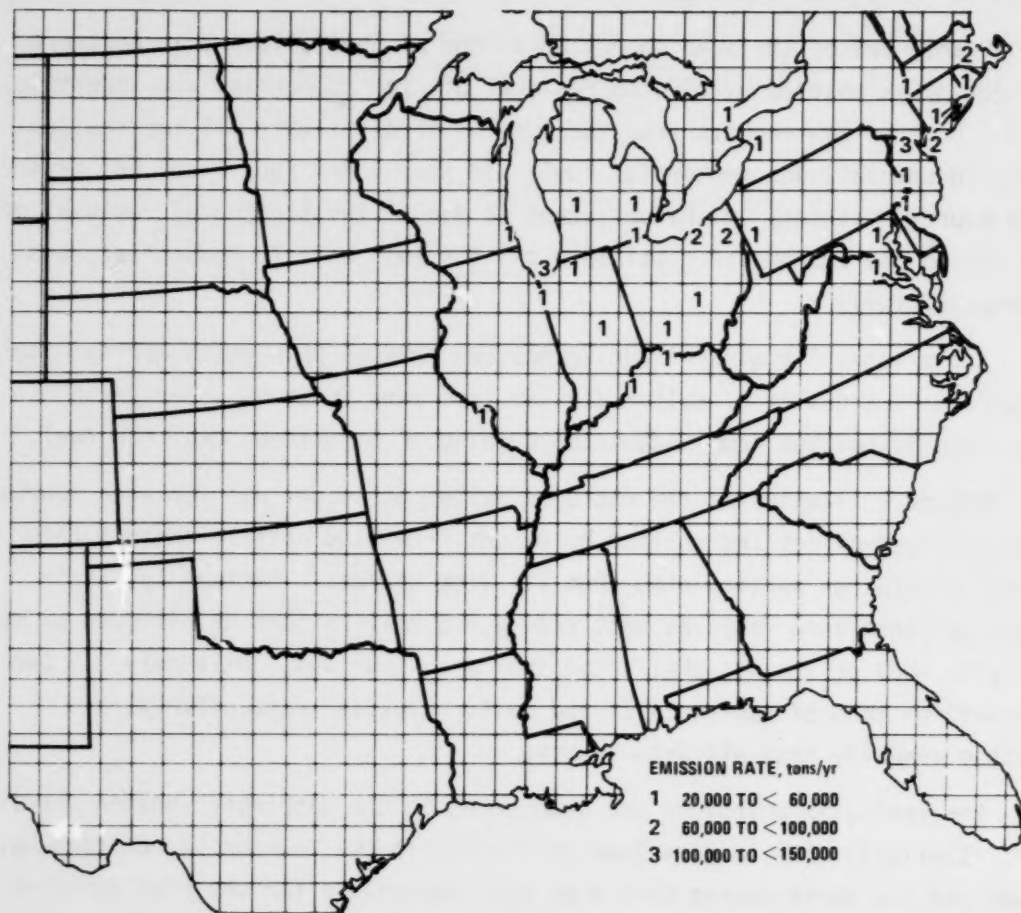


Figure 7. Gridded annual area source emissions (tons/year) of sulfur dioxide for the U.S. and Canada (80-km grid).

In Gary, the burning of bituminous coal for residential and industrial fuel accounts for nearly 60% of the area source emissions. The burning of residual oil for commercial fuel accounts for 11% and land vehicle exhaust accounts for 11% of the area source emissions.

Nearly 55% of the area source emissions of the pollutant in northern New Jersey is emitted by burning residual oil for commercial and industrial fuel. Another 29% results from the burning of distillate oil for residential, industrial, and commercial fuel. In nearby New York City, 60% of the area source emissions of the pollutant is due to the burning of residual oil and 24% to the burning of distillate oil for residential, industrial, and commercial fuel.

The greater Cleveland-Akron-Youngstown area of Ohio emits approximately 160,000 tons annually of sulfur dioxide from area sources. Nearly 75% of this rate is emitted from industrial burning of bituminous coal for fuel.

Figure 8 illustrates the nitrogen oxides emissions map for area sources. More nitrogen oxides are emitted by weight from land vehicle exhaust than sulfur dioxide or particulates from all area sources. Nationally, it is estimated that land vehicles emit nearly 9.3 million tons of nitrogen oxides annually (80% of the national total from area sources), while only 3.5 and 3.0 million tons of particulates and sulfur dioxide, respectively, are emitted annually from all area sources.

The vehicular emissions are pronounced in the Washington-Boston corridor. Similarly, the large volume of traffic in the Houston and Chicago-Gary areas and the northeastern Ohio area are responsible for the high emissions of nitrogen oxides. The lesser populated areas of Dallas, New Orleans, Miami, St. Louis, Milwaukee, Louisville, Detroit, and Pittsburgh emit lower amounts of the pollutant annually. However, the amounts are substantial - between 60,000 and 100,000 tons annually.

Figure 9 shows those areas where hydrocarbons are emitted in large quantities each year by area sources. Of the estimated 17.5 million tons of hydrocarbons emitted annually across the nation, 70% are attributed to land vehicle exhaust.

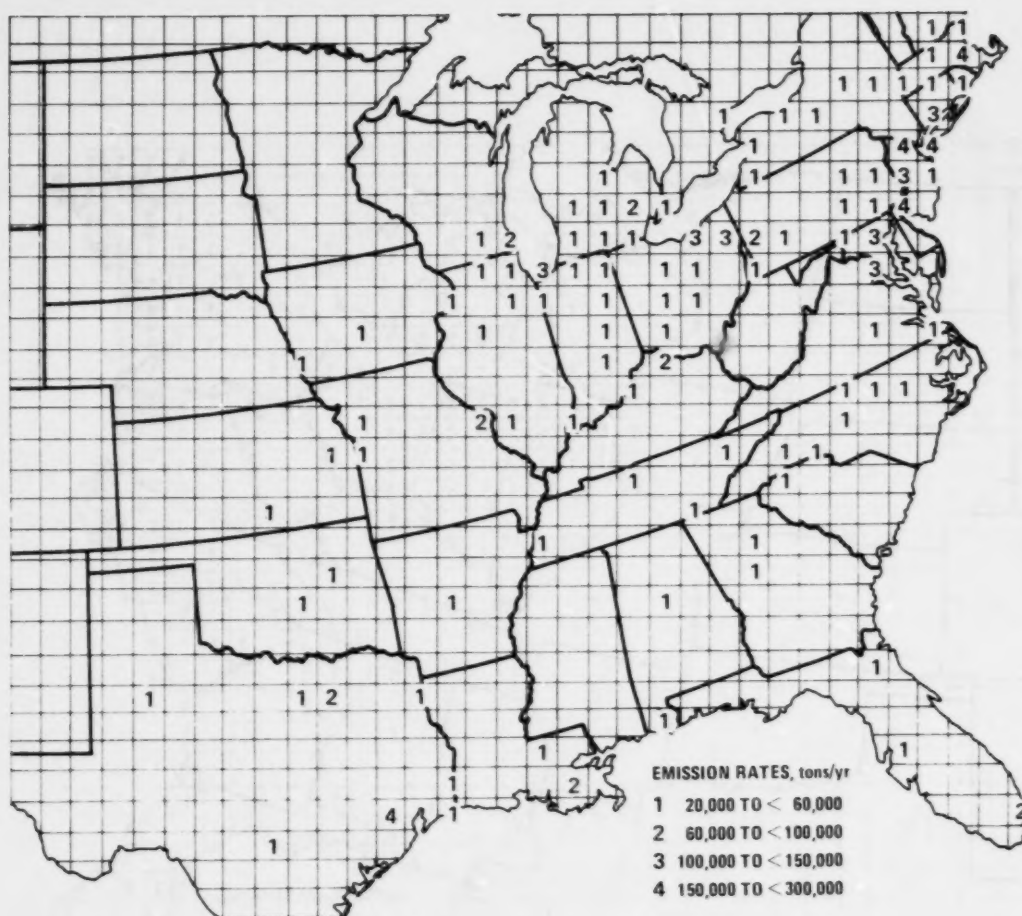


Figure 8. Gridded annual area source emissions (tons/year) of nitrogen oxides for the U.S. and Canada (80-km grid).

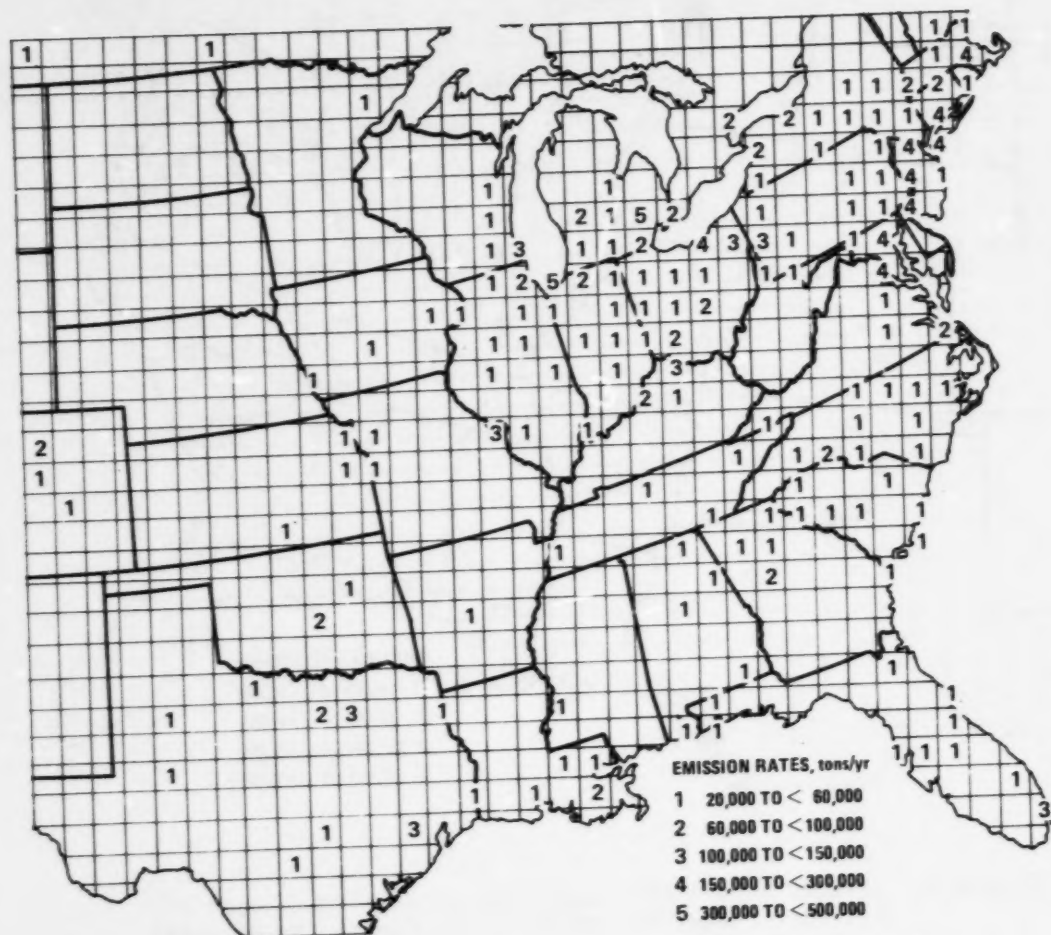


Figure 9. Gridded annual area source emissions (tons/year) of hydrocarbons for the U.S. and Canada (80-km grid).

The greatest quantities are emitted in the New York, Chicago, and Detroit metropolitan areas. Once again, the Washington-Boston corridor and metropolitan Cleveland are high emission areas. As expected, the less populated areas emit less hydrocarbons annually.

The last figure in this series. Figure 10, shows the areas where carbon monoxide is emitted in large quantities each year by area sources. Again, land vehicle exhaust is primarily responsible for the United States each year. Nearly 91% of the emissions is due to the exhaust, while almost 3% results from the burning of solid waste.

Those areas where nitrogen oxides and hydrocarbons emissions are high are also areas where carbon monoxide emissions are high. In Figure 10 many areas not identified in the previous emission maps as high emission areas show up as high emission areas, even though the minimum annual emission rate in the key was raised from 20,000 to 60,000 tons. This dramatizes how much more carbon monoxide is emitted by land vehicles than the other four pollutants considered here.

Less populated areas emit less carbon monoxide than the rates included in the highest category (800,000 to 1,600,000 tons), but the rates are substantial (300,000 to 800,000). These metropolitan areas include Miami, Atlanta, New Orleans, Houston, Dallas, Denver, Oklahoma City, St. Louis, Memphis, Charlotte, and numerous areas of the Midwest and Northeast. The Winnipeg, Manitoba and Regina, Saskatchewan metropolitan areas emit from 150,000 to 300,000 tons of carbon monoxide each year.

ANNUAL EMISSION GRIDS FOR REGIONAL-SCALE AIR QUALITY SIMULATIONS IN THE NORTHEASTERN UNITED STATES

Configuration of the Northeastern Emission Grid Network

To serve as input to air quality simulation models for the northeastern United States, higher resolution emission grids of annual area and point source emissions were created. The annual emission grid network for the Northeast is a 40 by 40 grid with a grid spacing of approximately 20 km. Figure 11 illustrates the relationship of this grid network with the 80-km grid network discussed earlier. In the figure, the largest grid square corresponds to grid square (30,26) on the 80-km grid network.

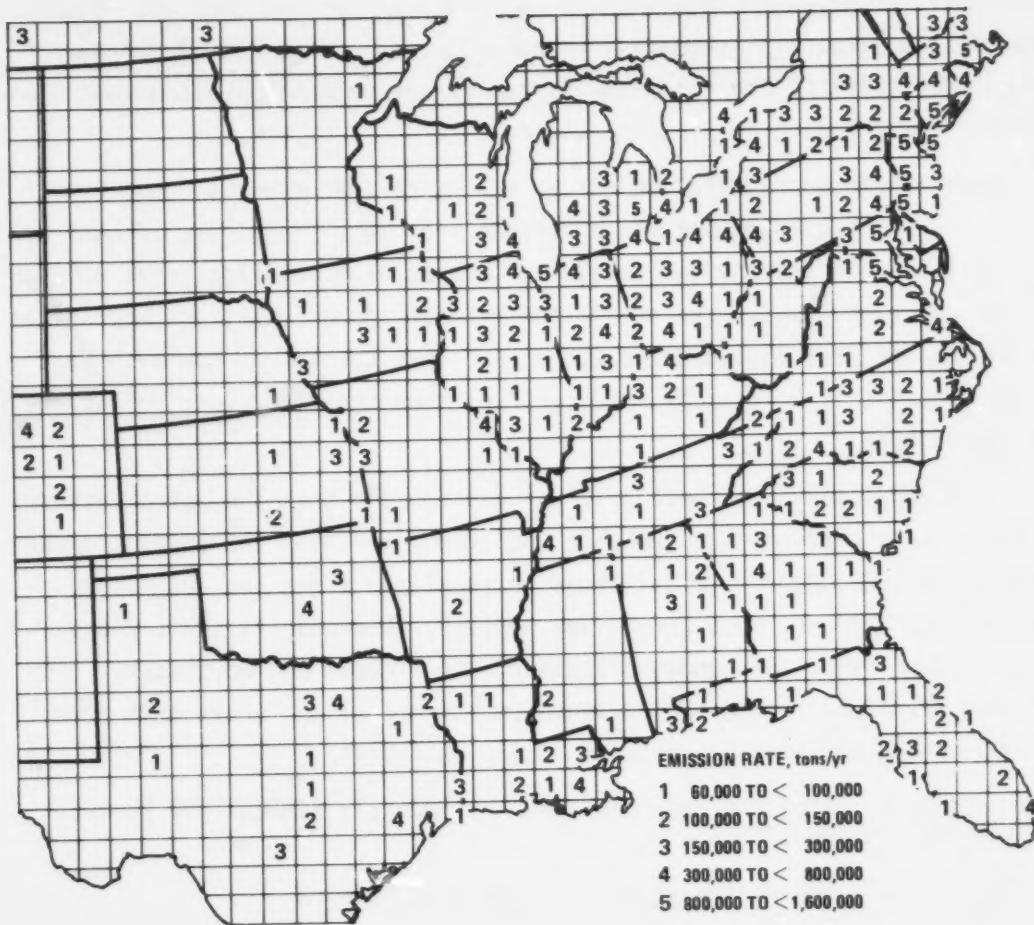


Figure 10. Gridded annual area source emission (tons/year) of carbon monoxide for the U.S. and Canada (80-km grid).

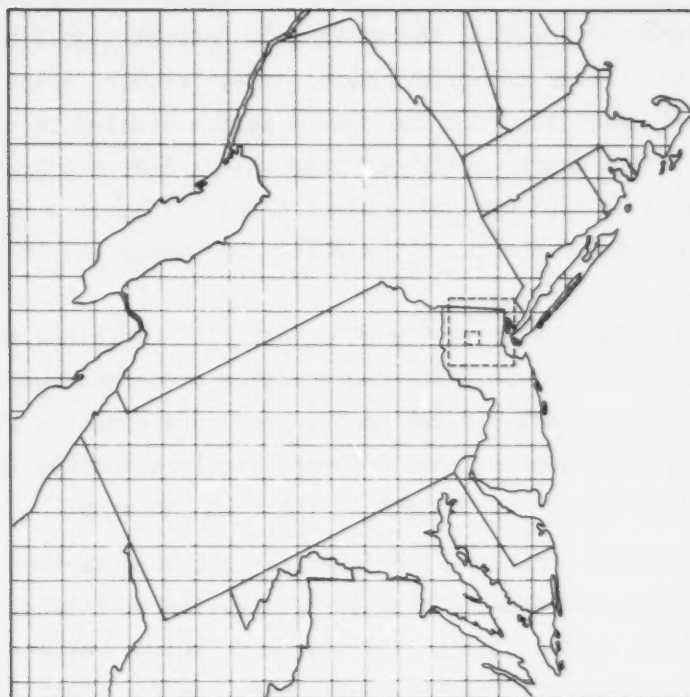


Figure 11. Orientation of single grid squares from the 80-km and 20-km grid networks superimposed on the entire 40-km grid network of the Northeast.

The smallest grid square in Figure 11 corresponds to grid square (27,21) on the 20-km grid network.

Procedure for Gridding Annual Emissions Onto the Northeast Grid Network

Annual Point Source Emissions--

The northeastern United States and southeastern Ontario point source emissions were apportioned to the 20-km grid network simply on the basis of source location. After the grid square containing each point source was identified, the emissions from the source were allocated to the appropriate grid squares. Point source emissions from United States sources with missing coordinates in NEDS were allocated to the grid square containing the geographical center of the county in which the source was located.

Annual Area Source Emissions--

Since the Ontario area source emissions file contained emission rates from sources within 1-km squares, the gridding procedure for the Ontario area source emissions was similar to the procedure used for the point source emissions. The area source emissions were simply allocated to the 20-km grid squares containing the centers of the 1-km squares.

Since no coordinates were furnished for the area sources in NEDS and the emissions were reported in NEDS as county-wide emissions, the gridding procedure for the United States area source emissions was markedly different. Because a 20-km grid spacing was chosen and the counties in the Northeast extend into several 20-km grid squares, the gridding procedure was designed to apportion the county-wide emissions to all grid squares containing portions of the individual counties.

Based upon the assumption that area source emissions in a given area are proportional to population density, the gridding procedure was designed to apportion the county-wide emissions to grid squares according to the percentage of the county population residing within the grid squares. Population distributions in each county were determined from 1970 United States Census Bureau Data, which included population and latitude and longitude of individual enumeration districts (towns and cities).

The gridding procedure involved converting the coordinates of each enumeration district to grid coordinates for each county. The population

of each enumeration district was allocated to the grid square containing the district. The percentage of the county population residing in the grid squares was then calculated.

Finally, the county-wide area source emissions were apportioned to the grid squares according to the percentage of population in each grid square. If 30% of the population of a county resided within the confines of a grid square, 30% of each of the annual rates of the five pollutants would be allocated to that grid square.

Discussion of the Northeastern Emission Grids

Annual Point Source Emission Grids--

The annual gridded emissions from point sources are presented in two formats. First, the actual point source emissions of the five criteria pollutants gridded onto the 20-km network are provided in tabular form in Appendix E. The emission rates in the appendix are listed first for the grid square in the lower left corner of the 20-km grid network (1,1). The point source emission rates from the remaining grid squares in that row follow. The point source emissions from the grid squares in the remaining rows are listed in similar fashion.

The second format presents the relative magnitudes of the annual point source emissions on 20 by 20 grid maps with a grid spacing of 40 km. The 40-km grid maps were used in the figures to prevent clutter. The annual point source emissions of particulates, sulfur dioxide, nitrogen oxides, hydrocarbons and carbon monoxide are depicted in Figures 12-16, respectively. Since the source classifications of the major sources in the highest-emitting grid squares were discussed earlier (see Discussion of 80-km Emission Grids) discussion of the 20-km point source emission maps is limited to the highlighting of the emission rates in the highest-emitting grid squares.

As the figures illustrating the gridded emissions on the 80-km network, Figures 12-16 identify those grid squares containing point sources which emit large amounts of any of the five pollutants. A number from 1 to 5 appears in these grid squares and denotes the relative emission rate in tons/year. The range of each of the emission classes appears in the lower right corner of the figures.

The lowest class of emission rates in this series of figures begins with 10,000 tons/year as opposed to the 20,000 tons/year in most of the 80-km emission maps. The maximum rate in the lowest range, as well as the rates in the remaining classes, were selected according to the range of emission rates across the grid network.

The point sources emitting large quantities of particulates (see Figure 12) are concentrated along the eastern Ohio River Valley and the Delaware River Valley. The grid squares where these emissions are greatest include the northern West Virginia panhandle (146,000 tons/year), the Trenton, New Jersey area (115,000 tons/year), the Cleveland area (94,000 tons/year), a portion of southern Ohio (78,000 tons/year), and a portion of northern New York (71,500 tons/year).

The major point sources of sulfur dioxide in the Northeast are located in the higher populated areas (see Figure 13). The largest sources are concentrated in the eastern Ohio-western Pennsylvania and the southeastern Pennsylvania areas. The emissions from the two grid squares encompassing Indiana, Pennsylvania (in western Pennsylvania), each designated with a "4", total 890,000 tons/year. Other large sources are located in grid squares encompassing the Marietta, Ohio area (444,000 tons/year), the Harrisburg, Pennsylvania area (406,000 tons/year), the area to the northeast of Marietta (371,000 tons/year), the Wilmington, Delaware area (336,000 tons/year), and the Zanesville, Ohio area (303,000 tons/year).

Most of the nitrogen oxides in the Northeast are emitted from sources in the Ohio and Delaware River Valleys and the New York metropolitan area (see Figure 14). The largest sources are located in grid squares encompassing New York City (169,000 tons/year), Clarksburg, West Virginia (123,000 tons/year), Indiana, Pennsylvania (104,000 tons/year), Harrisburg, Pennsylvania (98,000 tons/year), Wheeling, West Virginia (90,000 tons/year), the New Jersey portion of the New York metropolitan area (86,000 tons/year), and a portion of southeastern Ohio (77,000 tons/year).

Similar to the sources of sulfur dioxide emissions, the point sources of hydrocarbons are concentrated in the highly populated areas of the Northeast (see Figure 15). The grid square encompassing the Philadelphia area contains sources which emit 153,000 tons/year. Other high emission

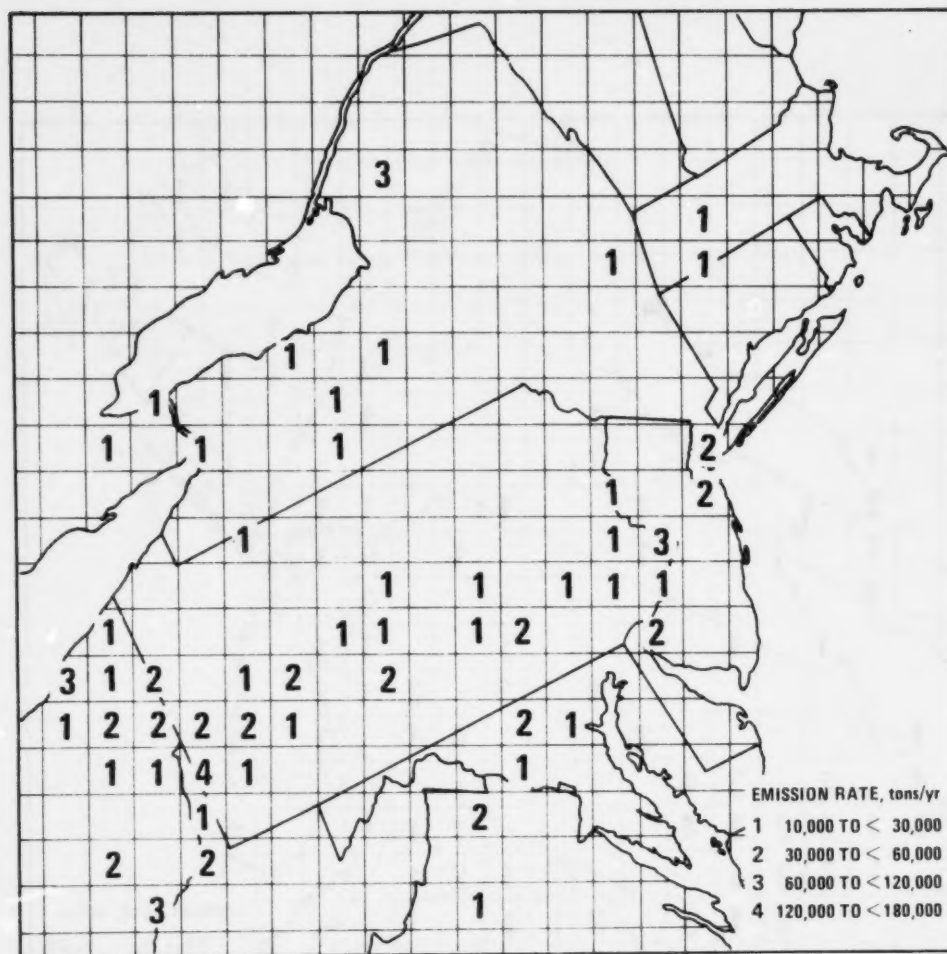


Figure 12. Gridded annual point source emissions (tons/year) of particulates for the northeastern U.S. and south eastern Ontario (20-km grid).

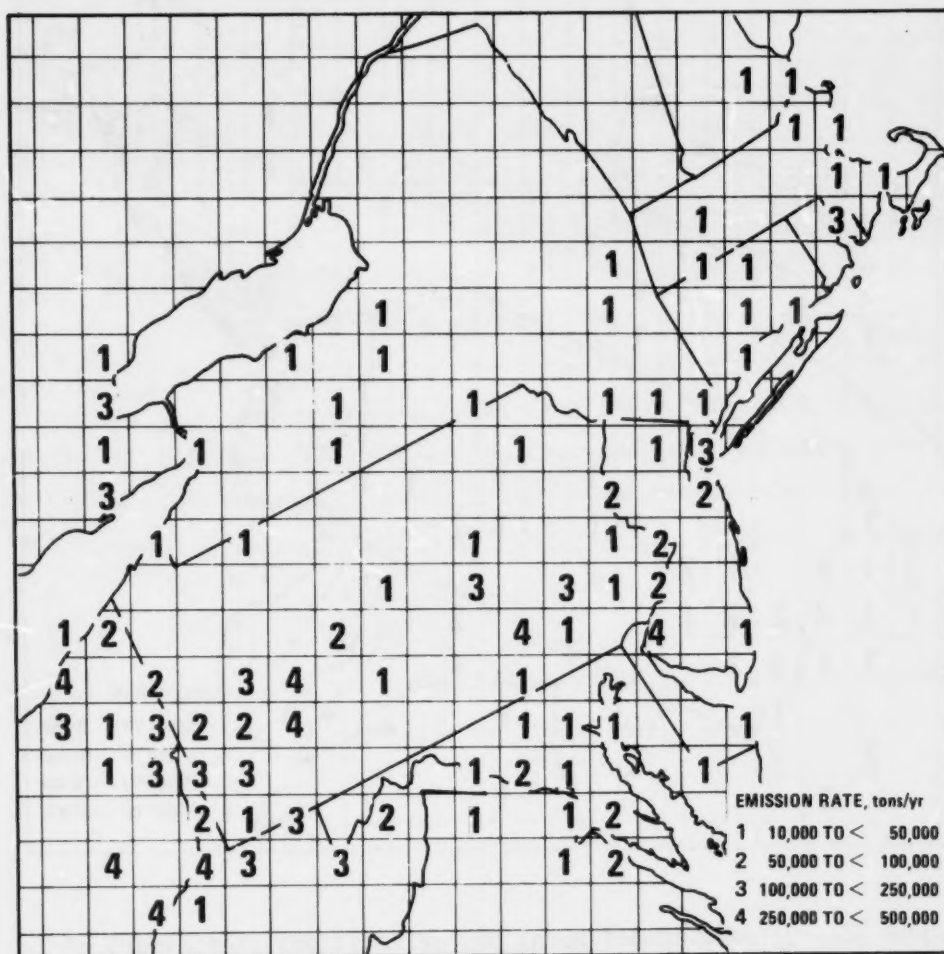


Figure 13. Gridded annual point source emissions (tons/year) of sulfur dioxide for the northeastern U.S. and southeastern Ontario (20-km grid).

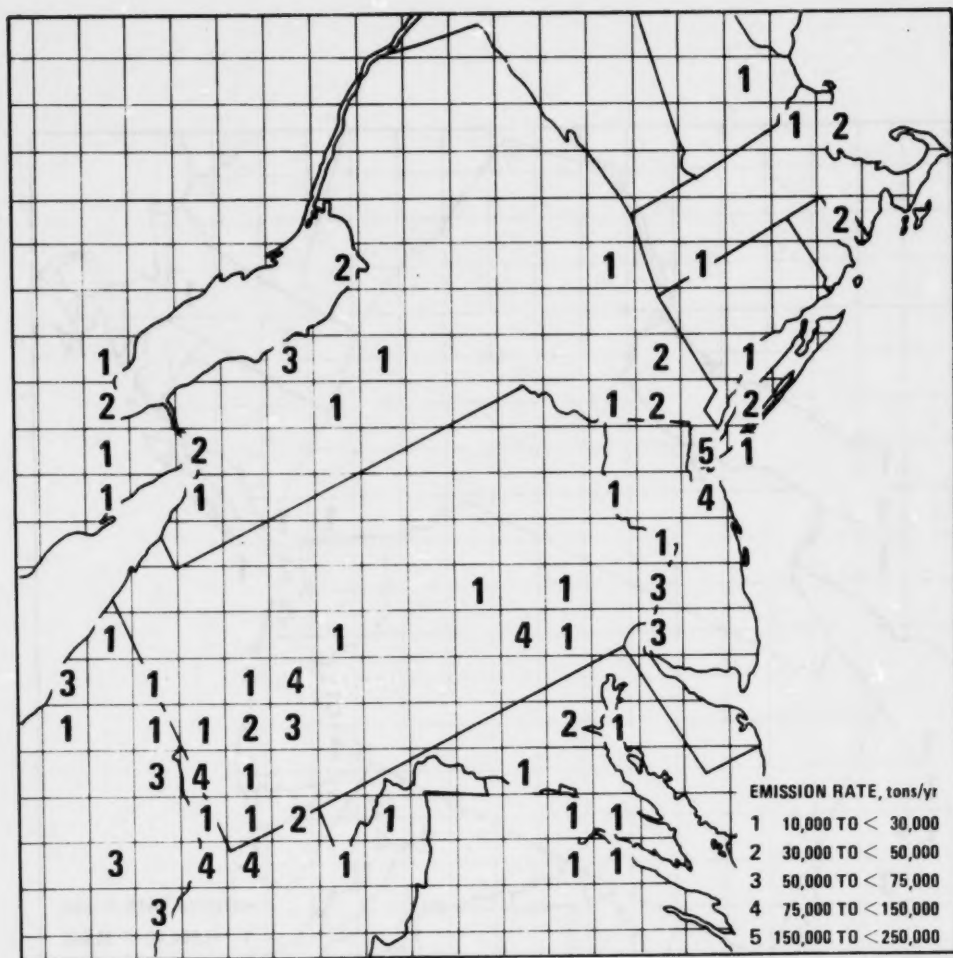


Figure 14. Gridded annual point source emissions (tons/year) of nitrogen oxides for the northeastern U.S. and southeastern Ontario (20-km grid).

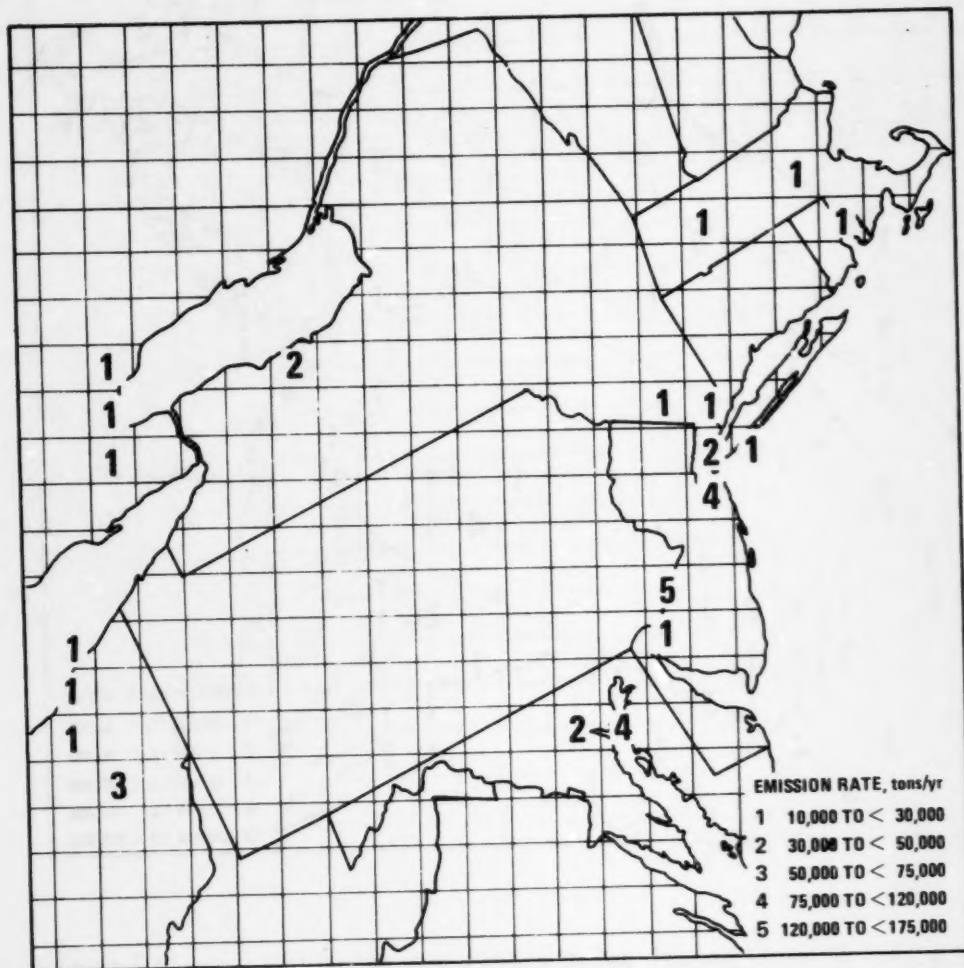


Figure 15. Gridded annual point source emissions (tons/year) of hydrocarbons for the northeastern U.S. and southeastern Ontario (20-km grid).

grid squares include those encompassing East Baltimore (86,000 tons/year), northeastern New Jersey (84,000 tons/year), and east-central Ohio (55,000 tons/year).

Figure 16 illustrates the location of large point sources of carbon monoxide in the Ohio and Delaware River Valleys and the Buffalo, New York area. The sources in the grid square containing the Philadelphia area emit more carbon monoxide (228,000 tons/year) than those in any other grid square. Other high emission grid squares contain sources in the Baltimore area (104,000 tons/year), Buffalo area (78,000 tons/year), and the New Jersey portion of the New York metropolitan area (76,000 tons/year).

Annual Area Source Emission Grids--

As mentioned previously, Northeastern annual area source emissions were gridded onto a network with a 20-km grid spacing. These area source emissions, like the point source emissions, are presented in two formats. First, the actual gridded emissions are provided in Appendix F in the same format as the gridded Northeastern point source emissions. Secondly, 40-km grid maps of area source emissions were created by summing the area source emissions from sets of four 20-km grid squares. Figures 17-21 illustrate the relative magnitude of the area source emissions of particulates, sulfur dioxide, nitrogen oxides, hydrocarbons, and carbon monoxide, respectively, for the 40-km grid network.

Since the area source emissions of particulates and sulfur dioxide are much less than the point source emissions, the minimal emission rate in the lowest emission class (class 1) was reduced from 10,000 to 5,000 tons/year in Figures 17 and 18. These two figures are quite similar in that the major area source emissions of the two pollutants are concentrated in the Boston to Washington, D. C. corridor and the northeastern Ohio area.

The grid square where the area source emissions of particulates are greatest (see Figure 17) is the one containing the Cleveland area where 90,596 tons/year are emitted. An annual total of 87,101 tons/year is emitted from area sources within the New York City grid square, while 44,168 tons/year are emitted from the grid square below the Cleveland grid square. The annual area source emissions in each of the remaining grid squares fall below 40,000 tons.

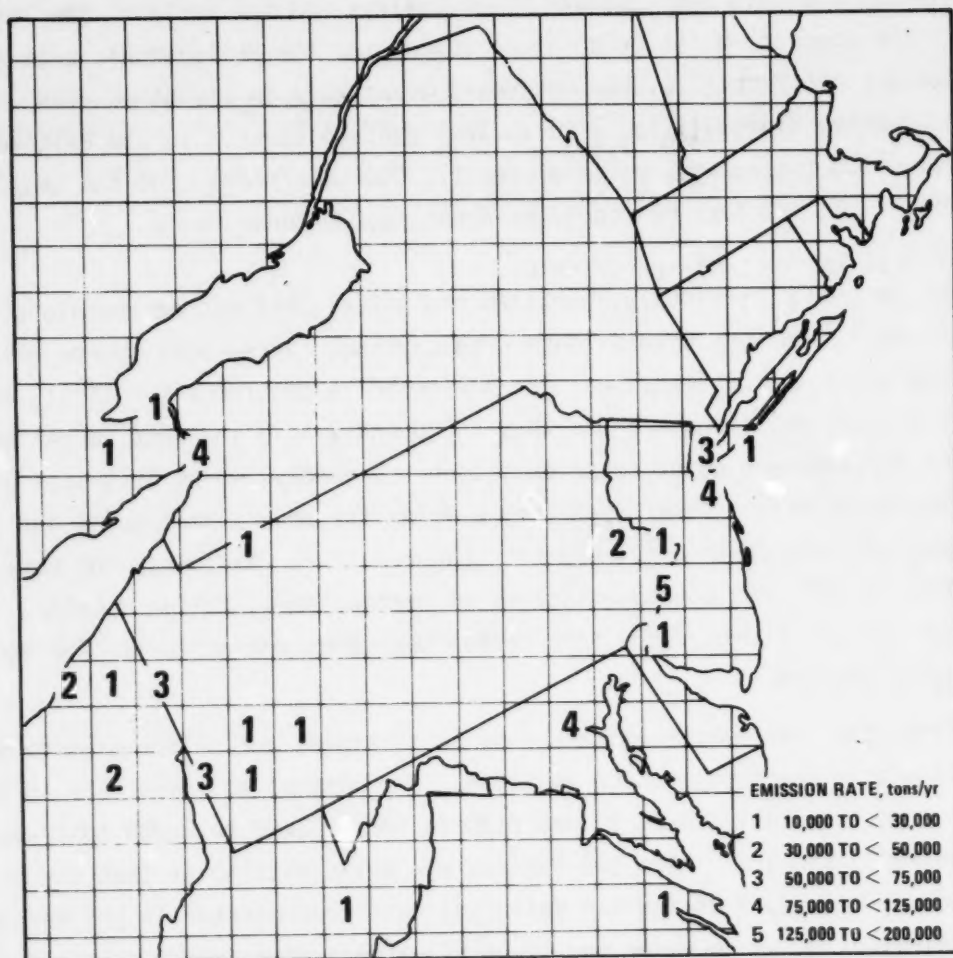


Figure 16. Gridded annual point source emissions (tons/year) of carbon monoxide for the northeastern U.S. and southeastern Ontario (20-km grid).

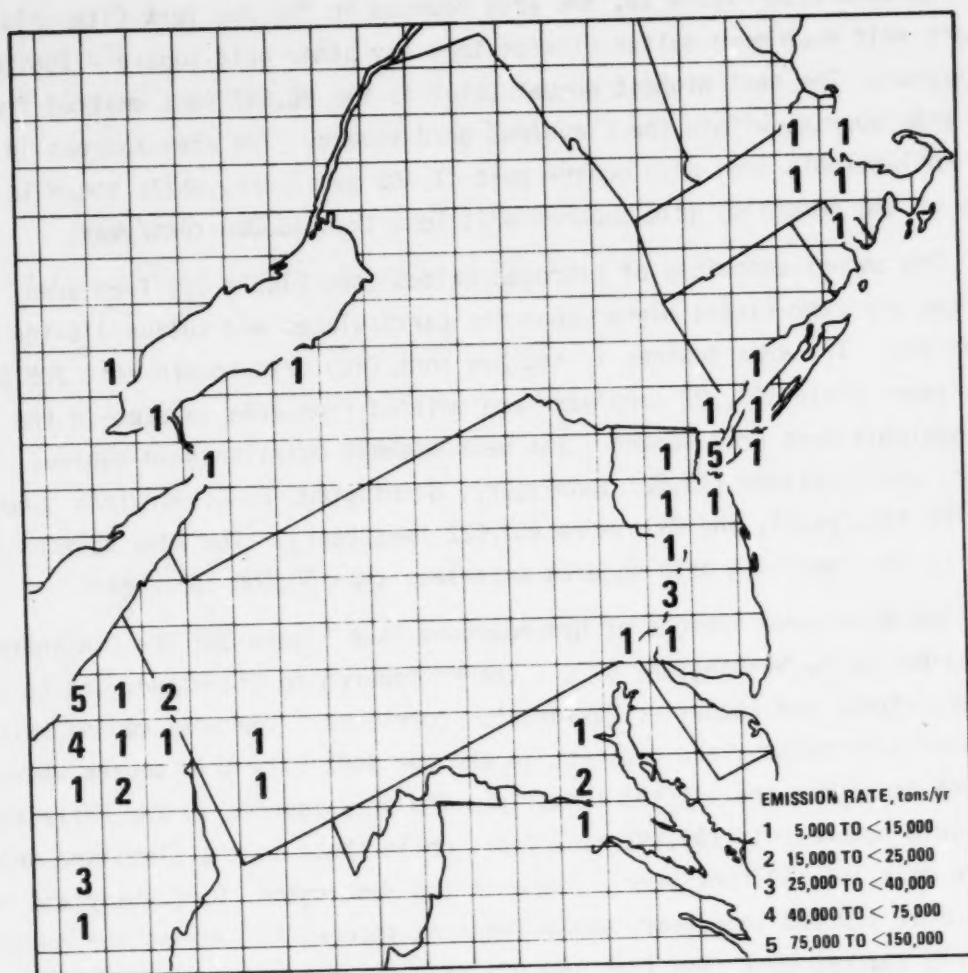


Figure 17. Gridded annual area source emissions (tons/Year) of particulates for the northeastern U.S. and southeastern Ontario (20-km grid).

As seen from Figure 18, the area sources in the New York City grid square emit much more sulfur dioxide than any other grid square - 158,185 tons/year. The next highest annual total is the 80,697 tons emitted from the area sources within the Cleveland grid square. The area sources in the Philadelphia area grid square emit 47,463 tons/year, while those in each of the remaining grid squares emit less than 40,000 tons/year.

The annual emissions of nitrogen oxides (see Figure 19) from area sources are appreciable higher than the particulates and sulfur dioxide emissions. The area sources in the New York City grid square emit 325,673 tons/year, while 143,382 tons/year are emitted from area sources in the Philadelphia area grid square. The next highest emission grid squares, in order, are Cleveland (78,823 tons/year), Washington, D. C.-Maryland suburbs (75,726 tons/year), and Baltimore (63,622 tons/year). The area sources in each of the remaining grid squares emit less than 50,000 tons/year.

The major area sources of hydrocarbons (see Figure 20) are concentrated in the Boston to Washington, D. C., the Pittsburgh to Cleveland, and to a lesser extent, the Rochester to Toronto corridors. The area source emissions of hydrocarbons are greatest in the New York City grid square where 475,048 tons/year are emitted annually. The area sources in the Philadelphia area grid square emit 193,491 tons/year, while those in the Cleveland grid square emit 154,749 tons/year. Those in the Washington, D. C.-Maryland suburbs emit 110,663 tons/year, while the area sources in each of the remaining grid squares emit less than 100,000 tons/year.

Figure 21 shows the areas of high carbon monoxide emissions are also areas of high hydrocarbons emissions. Once again, area sources within the New York City grid square emit the greatest amount 1,893,482 tons/year. The area sources with the Philadelphia-area grid square emit 1,093,002 tons/year while those in the Cleveland grid square emit 593,726 tons/year. The area sources in the Washington, D. C.-Maryland suburbs emit 574,083 tons/year, while those in each of the remaining grid squares emit less than 500,000 tons/year.

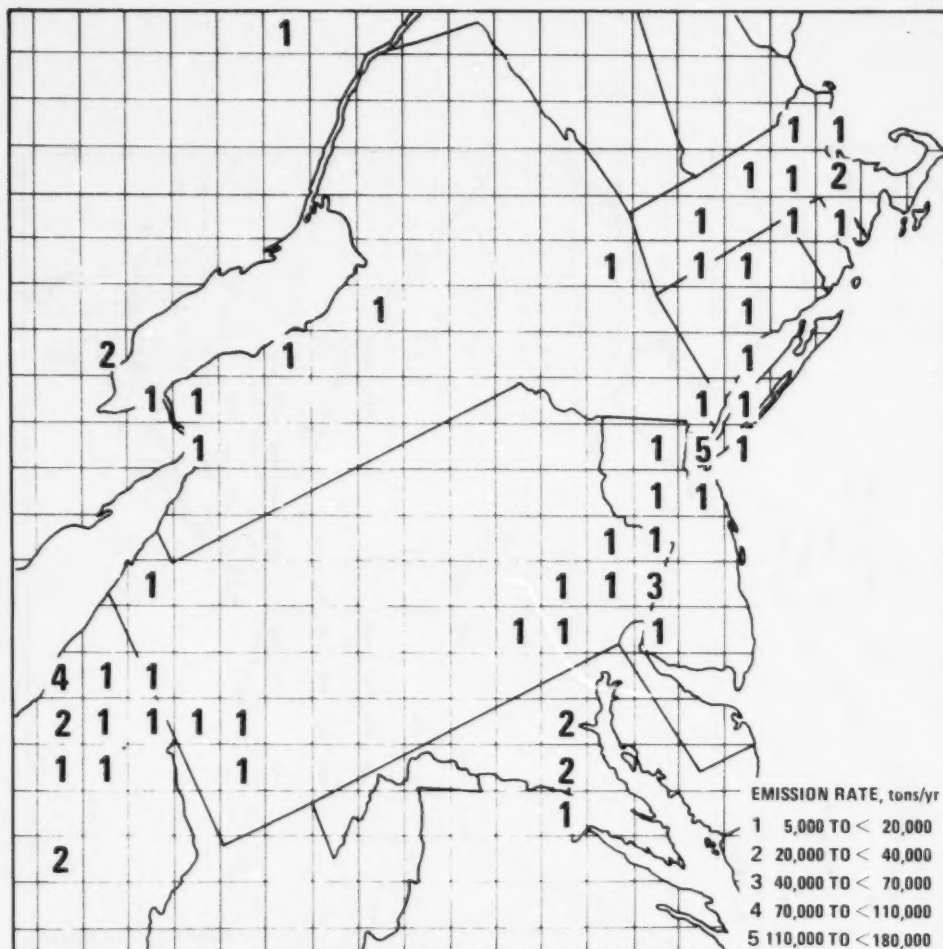


Figure 18. Gridded annual area source emissions (tons/year) of sulfur dioxide for the northeastern U.S. and south-eastern Ontario (20-km grid).

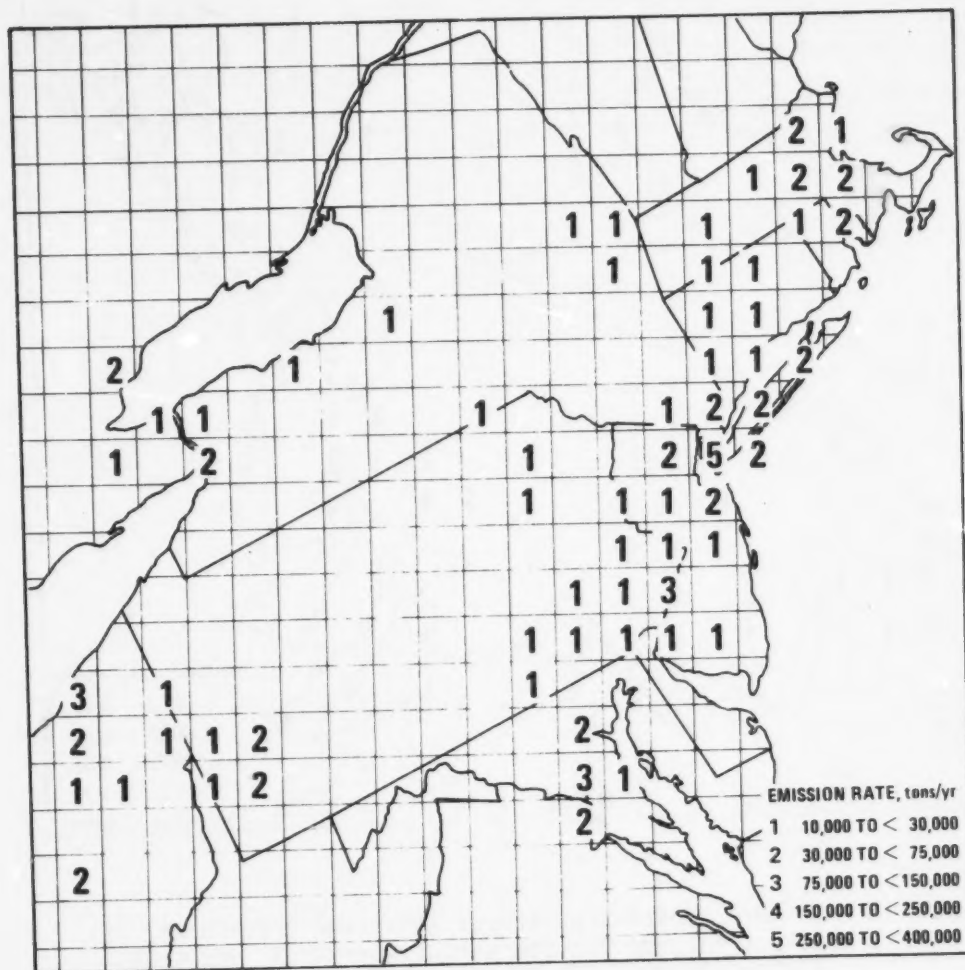


Figure 19. Gridded annual area source emissions (tons/year) of nitrogen oxide for the northeastern U.S. and southeastern Ontario (20-km grid).

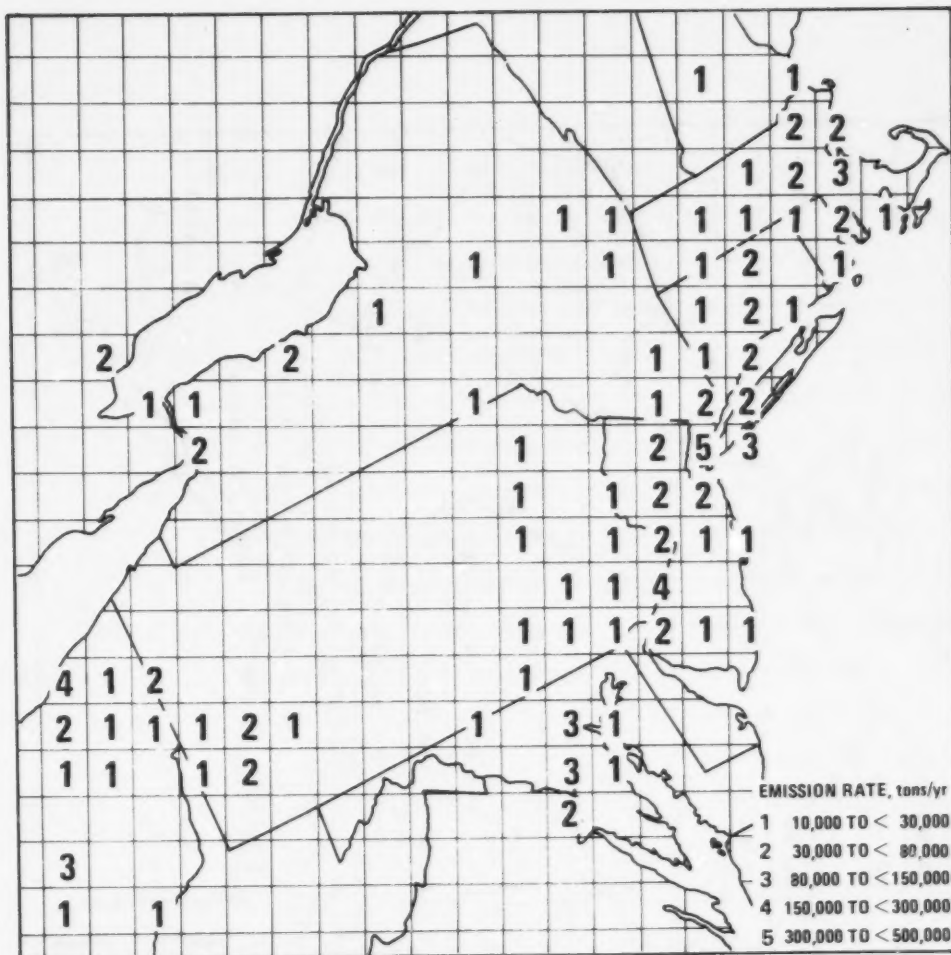


Figure 20. Gridded annual area source emissions (tons/year) of hydrocarbons for the northeastern U.S. and southeastern Ontario (20-km grid).

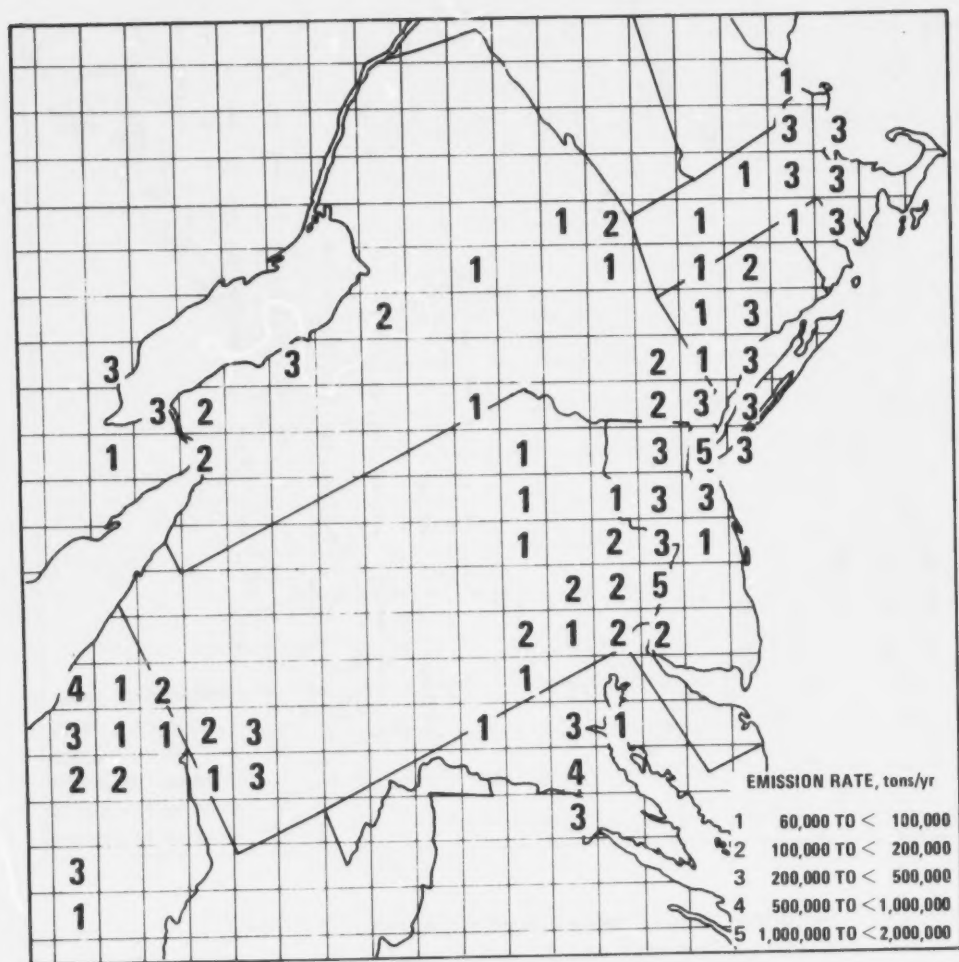


Figure 21. Gridded annual area source emissions (tons/year) of carbon monoxide for the northeastern U.S. and southeastern Ontario (20-km grid).

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APPENDIX A
YEARS OF NEDS POINT SOURCE EMISSION RECORDS

The following table shows for each state east of the Rocky Mountains the percentage of NEDS point source emission records created for each of the years in the period 1969-1977. There is one record for every type of fuel burned at each point source. In addition, the extreme righthand column contains the number of point source emission records for each state.

For each state in the table, there is a pair of numbers in adjacent columns enclosed by parentheses. The years at the top of the adjacent columns represent roughly the period in which most of the point source emission records for that state were created.

From the table, it is readily seen that these periods vary from state to state. This is a drawback inherent in the NEDS data base. However, since it is not known if the data from the earlier point source emission records have changed drastically over the years, it is impossible to estimate just how serious this drawback is from the table alone.

TABLE A-1 YEAR OF POINT SOURCE RECORDS IN NEDS (%)

State	≤69	70	71	72	73	74	75	76	77	Total number of records
Alabama	1	0	2	(40	6)	5	24	13	8	3861
Arkansas	13	4	3	1	3	(63	13)	1	0	1760
Colorado	5	6	2	6	22	(25	24)	9	0	744
Connecticut	0	0	(100)	0	0	0	0	0	0	516
Delaware	1	0	1	(64	1)	2	1	27	4	771
D. C.	0	13	0	0	3	4	(75	5)	0	101
Florida	4	16	(29	18)	10	7	15	1	0	4376
Georgia	2	0	0	1	2	10	(57	28)	0	1890
Illinois	0	(75	4)	17	3	1	0	0	0	3552
Indiana	0	0	0	2	1	38	3	(20	34)	6488
Iowa	7	0	0	15	26	(3	48)	1	0	6237
Kansas	1	1	11	12	(2	68)	1	2	2	7238
Kentucky	1	0	2	14	7	(0	76)	0	0	7792
Louisiana	3	11	11	19	5	(34	17)	0	0	2787
Maine	6	15	(39	24)	7	6	3	0	0	1982
Maryland	3	5	(42	17)	19	12	0	0	0	1974
Massachusetts	14	23	3	(30	15)	14	0	0	0	2523
Michigan	0	16	0	2	2	(1	78)	1	0	3384
Minnesota	0	0	2	0	1	(36	61)	0	0	1944
Mississippi	1	12	(15	42)	0	7	11	9	3	5482
Missouri	0	5	0	0	(20	72)	1	0	0	2438
Montana	0	11	0	(32	33)	14	7	3	0	535
Nebraska	1	0	0	0	7	(22	69)	0	0	4351
New Hampshire	0	15	0	(42	1)	17	22	2	0	692
New Jersey	0	1	0	0	0	37	(3	59)	0	5081
New Mexico	0	3	(43	40)	1	10	2	1	0	1531
New York	2	0	1	0	0	2	21	(25	40)	32182
North Carolina	1	9	(37	26)	19	6	2	0	0	6012
North Dakota	0	1	0	(79	1)	5	8	5	2	2571
Ohio	2	0	0	0	0	0	(45	46)	7	5897
Oklahoma	1	2	16	23	(10	31)	10	8	0	1908
Pennsylvania	1	(28	20)	2	13	1	36	0	0	5273
Rhode Island	1	0	0	0	(82	17)	0	0	0	913
South Carolina	0	23	17	(22	21)	13	4	1	0	2077
Tennessee	0	3	4	14	14	(20	30)	16	0	8716
Texas	1	4	0	0	(94	1)	0	0	1	10398
Vermont	18	0	0	2	0	(0	79)	0	0	782
Virginia	1	0	0	(92	0)	6	1	0	0	2948
West Virginia	2	0	0	0	0	(0	98)	3	0	1146
Wisconsin	1	0	(78	8)	7	1	1	3	0	1373
Wyoming	0	0	15	5	2	(32	46)	0	0	465

APPENDIX B
COMPUTER CODE TO CONVERT POLLUTANT SOURCE COORDINATES
TO THE 80-GRID COORDINATES

The following computer code was used to convert pollutant source coordinates to grid coordinates on the 80-km grid. Subroutine UTMC converts the UTM coordinates of the sources ('NZ' is the UTM-zone, 'UTMN' is the UTM-north coordinate, while 'UTME' is the UTM-east coordinate) to latitude and longitude (DLAT and DLON, respectively). Subroutine CONVB, when 'KEY' is equal to one, converts to latitude and longitude to the 80-km grid coordinates ('X' is the row and 'Y' the column).

The grid network is a 35 by 30 array of uniform grid squares with an approximate dimension of 80 km. The grid network is a polar stereographic projection true at 60°N. The coordinates of the center of grid square (1,1) at the lower left corner of the grid are 29.675°N and 105.000°W.

```

1      SUBROUTINE UTM(NZ,UTMN,UTME,DLAT,DLON)
2      RAD = 3.14159265 / 180.0
3      DLAT = UTMN / 111.
4      DDLON = (UTME - 500.) / ((111.226 + 0.0053*DLAT)*COS(DLAT*RAD))
5      DUTMN = (3187.*SIN(2*DLAT*RAD))*(1. - COS(DDLON*RAD))
6      UTMNMP = UTMN - DUTMN
7      DLAT = (UTMNMP - 2.41 - 0.00903*DLAT**2) / 110.27
8      DDLON = (UTME - 500.) / ((111.226 + 0.0053*DLAT)*COS(DLAT*RAD))
9      DLONMP = 180. - 6.*NZ + 3
10     DLON = DLONMP - DDLON
11     RETURN
12     END

```

```

1      SUBROUTINE CONV(X,Y,DLAT,DLON,KEY)
2      C      MAP/EARTH SPACE CONVERSION FOR POLAR STEREOGRAPHIC TRUE AT 60
3      C      DEGREES NORTH. GRID SPACING IS ASSUMED TO BE 1/4 STANDARD NMC.
4      C      BOUNDARY LAYER GRID WITH POLE POINT (1.,75.),REFERENCE
5      C      LONGITUDE ALONG Y AXIS IS 105 DEGREES WEST. GRID ORIGIN
6      C      POINT (X=1.,Y=1.) IS AT 28.675 DEG NORTH AND 105 DEGREES
7      C      WEST LONGITUDE.
8      C      KEY=1 CONVERTS LATITUDE AND LONGITUDE IN DEGREES TO MAP
9      C      X,Y COORDINATES. LONGITUDE CAN BE IN 0-360 DEGREE
10     C      SYSTEM OR 0-90 DEGREE EAST OF GREENWICH AND NEGATIVE
11     C      0-90 DEGREES WEST OF GREENWICH SYSTEM.
12     C      KEY=2 CONVERTS MAP X,Y TO LATITUDE AND LONGITUDE IN DEGREES.
13     C      LONGITUDE IS IN STANDARD 0-360 DEGREE EAST OF GREENWICH
14     C      FORM.
15     C      PARAMETERS...RA=MAP REFERENCE ANGLE. LONGITUDE LINE PARALLEL
16     C      TO X AXIS... NOTE,THAT IS THE X AXIS,NOT Y AXIS
17     C      XP,YP=POLE POINTS IN MAP SPACE
18     C      C=GRID UNITS FROM POLE TO EQUATOR ON MAP.
19     C      (C=31.204359 FOR STANDARD NMC GRID)
20     C      C2=C*C
21     DATA XP/1.,YP/75.,C/124.8174361 /,C2/15579.39235/,RA/-15./
22     PI = 3.14159
23     R=PI/180.
24     D=180./PI
25     GO TO(5,20),KEY
26     5 PS=DLAT*R
27     AL=(360. - DLON-RA)*R
28     IF(PS .LT. 0. .OR. PS .GT. PI/2.) GO TO 10
29     SP=SIN(PS)
30     CP=COS(PS)
31     CL=COS(AL)
32     SL=SIN(AL)
33     AA=C*CP/(1.+SP)
34     X=XP+AA*CL

```

```

35      Y=YP+AA*SL
36      RETURN
37      10  X=9999.
38          Y=9999.
39      RETURN
40      20  CP=X-XP
41          SP=Y-YP
42          IF(CP)25,21,25
43      21  IF(SP)23,22,24
44      22  DLON=0.
45          DLAT=90.
46      RETURN
47      23  DLON=3.*PI/2.
48          GO TO 35
49      24  DLON=PI/2.
50          GO TO 35
51      25  ALI=ATAN(ABS(SP/CP))
52          IF(CP)26,21,29
53      26  IF(SP)27,27,28
54      27  DLON=ALI+PI
55          GO TO 35
56      28  DLON=PI-ALI
57          GO TO 35
58      29  IF(SP) 30,31,31
59      30  DLON=2.*PI-ALI
60          GO TO 35
61      31  DLON=ALI
62      35  AA=CP*CP+SP*SP
63          AA=(C2-AA)/(C2+AA)
64      C    LATITUDE, LONGITUDE IN DEGREES
65          DLAT=ASIN(AA)*D
66          DLON=DLON*D+RA
67          IF(DLON .LT. 0.) DLON=DLON+360.
68          IF(DLON .GT. 360.) DLON=DLON-360.
69      RETURN
70      END

```


APPENDIX C

SUMMARY OF INADEQUATE COORDINATES IN THE NEDS POINT SOURCE INVENTORY

Much time and effort were taken to ensure the coordinates of the NEDS point sources were reasonable prior to the execution of the gridding procedure. No attempt was made to identify coordinate errors of small magnitude (less than 40 km). Instead, the more obvious errors (typically greater than 40 km) were identified and the coordinates replaced with the coordinates of the geographical center of the county in which the source was located. Since these coordinates were grossly in error and the true coordinates unknown, using the geographical center of the county for the location of the point source reduced the error in the gridding procedure.

The gross errors in the coordinates in the NEDS point source records resulted either from an incorrect UTM zone or an incorrect UTM-north coordinate and/or UTM-east coordinate. The procedure of error identification was simplified by quickly scanning the 80-km grid coordinates instead of the actual UTM coordinates directly. This made the procedure more efficient as well, since errors in the grid coordinates were more readily noticed than errors in the eleven-digit UTM coordinates.

The following table lists for each state east of the Rocky Mountains the number of NEDS point source records and the actual number and percentage of point source records with UTM coordinates in error. At least 10% of the Oklahoma and Georgia point source records contained UTM coordinates in error.

Also included in the table are the number and percentage of NEDS point source records with incomplete coordinates (no reported UTM zone and/or UTM-north and UTM-east coordinates). Almost all the Kansas point source records contained no UTM coordinates at all. Over two-thirds of the records for Nebraska and Michigan contained incomplete coordinates.

TABLE C-1. STATISTICS OF INADEQUATE COORDINATES FOR POINT SOURCES IN NEDS

State	# records in NEDS	Coordinates in error (# records)	% of records in error	Incomplete coordinates (# records)	% of incom- plete records
Alabama	3861	17	0.4	89	2.5
Arkansas	1760	12	0.7	8	0.5
Colorado	744	-	-	268	36.0
Connecticut	516	31	6.0	0	0.0
Delaware	771	6	0.8	125	16.2
D. C.	101	0	0.0	4	4.0
Florida	6514	105	1.6	1643	25.2
Georgia	1896	191	10.0	101	5.3
Illinois	3552	68	1.9	307	8.6
Indiana	6506	47	0.7	277	4.3
Iowa	9825	33	0.3	4378	44.6
Kansas	7524	0	0.0	7521	100.0
Kentucky	7792	268	3.4	46	0.6
Louisiana	2787	154	5.5	20	0.7
Maine	2138	-	-	289	13.5
Maryland	3696	2	0.1	6	0.2
Massachusetts	2541	45	1.8	120	4.7
Michigan	3384	257	7.6	2315	68.4
Minnesota	1944	0	0.0	1241	63.8
Mississippi	5482	69	1.3	3964	72.3
Missouri	2438	139	5.7	107	4.4
Montana	535	0	0.0	20	3.7
Nebraska	4375	113	2.6	3752	85.8
New Hampshire	692	4	0.6	26	3.8
New Jersey	5105	42	0.8	292	5.7
New Mexico	1531	12	0.8	134	8.8
New York	32182	173	0.5	399	1.2
North Carolina	8388	326	8.9	2609	31.1
North Dakota	2589	74	2.9	101	3.9
Ohio	5897	50	0.8	47	0.8
Oklahoma	1908	274	14.4	286	15.0
Pennsylvania	6293	105	1.7	499	7.1

TABLE C-1 (continued)

<u>State</u>	<u># records in NEDS</u>	<u>Coordinates in error (# records)</u>	<u>% of records in error</u>	<u>Incomplete coordinates (# records)</u>	<u>% of incom- plete records</u>
Rhode Island	913	4	0.4	78	8.5
South Carolina	2131	87	4.1	418	19.6
South Dakota	220	20	9.1	66	30.0
Tennessee	8716	617	7.1	465	5.3
Texas	10398	347	3.3	1230	11.8
Vermont	782	25	3.2	8	1.0
Virginia	2948	81	2.7	33	1.1
West Virginia	1146	32	2.8	26	2.3
Wisconsin	1357	37	2.7	187	13.6
Wyoming	465	7	1.5	188	40.4
Total	174,365	3874*	2.3*	33643	19.3

*not including Colorado and Maine

APPENDIX D

ANNUAL EMISSION GRIDS FOR LONG-RANGE AIR QUALITY SIMULATION STUDIES

Annual emissions expressed in tons of particulates, sulfur dioxide, nitrogen oxides, hydrocarbons, and carbon monoxide from point and area sources were apportioned to 80-km grid squares on a 35 by 30 grid network encompassing much of the United States and Southern Canada east of the Rocky Mountains. Section D-1 contains the gridded point source emissions, Section D-2 the gridded area source emissions, while Section D-3 contains the gridded point and area source emissions for the five pollutants,

The first grid square listed in each section (1,1) refers to the grid square in the lower-left corner of the grid network depicted in Figures 1-10 of the text. Figure D-1 identifies the X and Y coordinates of the center of each of the 1050 grid squares. Each page of data in this appendix contains the annual emissions from sources within the grid squares of two adjacent rows (X varies from 1 to 35).

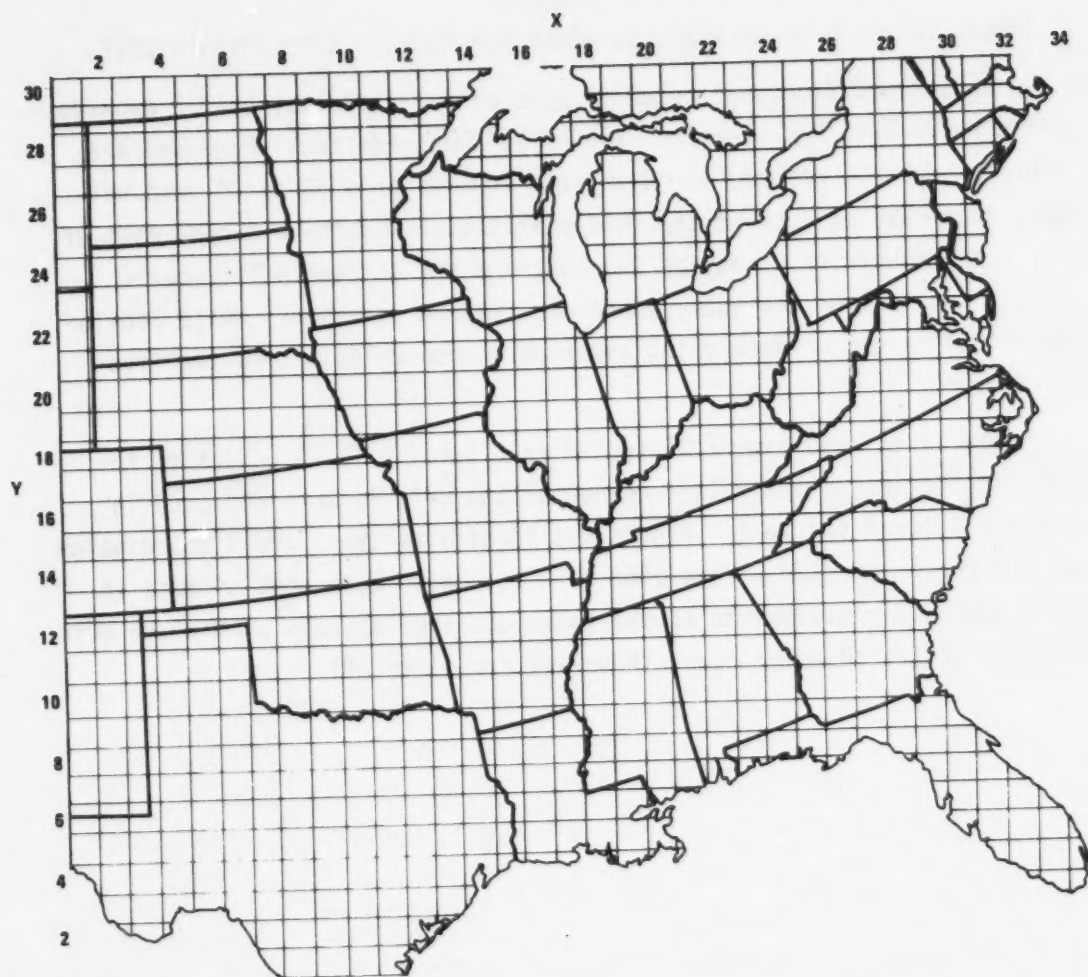


Figure D-1. The grid coordinates of the 35 by 30 grid network with an 80-km grid spacing.

SECTION D-1

GRIDDED POINT SOURCE EMISSIONS (TONS/YEAR) ON THE 80-KM GRID NETWORK

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60MM)

POINT SOURCE EMISSIONS

GRID FT	PART	SO2	NOX	HC	CO	GRID FT	PART	SO2	NOX	HC	CO
(1, 1)	0	0	0	0	0	(1, 2)	0	0	0	0	0
(2, 1)	0	0	0	0	0	(2, 2)	0	0	0	0	0
(3, 1)	0	0	0	0	0	(3, 2)	0	0	0	0	0
(4, 1)	0	0	0	0	0	(4, 2)	0	0	0	0	0
(5, 1)	0	0	0	0	0	(5, 2)	0	0	0	0	0
(6, 1)	0	0	0	0	0	(6, 2)	1	0	4	78	0
(7, 1)	869	0	10	2051	0	(7, 2)	1469	0	0	0	0
(8, 1)	3	10	980	130	2	(8, 2)	3806	953	3	0	1
(9, 1)	10	1948	310	130	2	(9, 2)	726	11760	10585	1852	620
(10, 1)	846	1159	1107	678	3	(10, 2)	102	5196	805	648	6
(11, 1)	5649	3999	78674	6972	124597	(11, 2)	528	46	11543	7602	14856
(12, 1)	0	0	0	33	0	(12, 2)	25343	2530	96324	67072	448
(13, 1)	0	0	0	0	0	(13, 2)	3272	687	15366	143986	6896
(14, 1)	0	0	0	0	0	(14, 2)	0	0	0	0	0
(15, 1)	0	0	0	0	0	(15, 2)	0	0	0	0	0
(16, 1)	0	0	0	0	0	(16, 2)	0	0	0	0	0
(17, 1)	0	0	0	0	0	(17, 2)	0	0	0	0	0
(18, 1)	0	0	0	0	0	(18, 2)	0	0	0	0	0
(19, 1)	2	0	17	0	1	(19, 2)	0	0	0	0	0
(20, 1)	0	0	0	0	0	(20, 2)	0	0	0	0	0
(21, 1)	0	0	0	0	0	(21, 2)	0	0	0	0	0
(22, 1)	0	0	0	0	0	(22, 2)	0	0	0	0	0
(23, 1)	0	0	0	0	0	(23, 2)	0	0	0	0	0
(24, 1)	0	0	0	0	0	(24, 2)	0	0	0	0	0
(25, 1)	0	0	0	0	0	(25, 2)	0	0	0	0	0
(26, 1)	0	0	0	0	0	(26, 2)	0	0	0	0	0
(27, 1)	0	0	0	0	0	(27, 2)	0	0	0	0	0
(28, 1)	0	0	0	0	0	(28, 2)	0	0	0	0	0
(29, 1)	0	0	0	0	0	(29, 2)	0	0	0	0	0
(30, 1)	0	0	0	0	0	(30, 2)	0	0	0	0	0
(31, 1)	0	0	0	0	0	(31, 2)	0	0	0	0	0
(32, 1)	0	0	0	0	0	(32, 2)	0	0	0	0	0
(33, 1)	0	0	0	0	0	(33, 2)	80	596	2443	48	76
(34, 1)	0	0	0	0	0	(34, 2)	0	0	0	0	0
(35, 1)	0	0	0	0	0	(35, 2)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80KM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1, 3)	0	0	0	0	0	(1, 4)	15	0	0	0	0
(2, 3)	0	0	0	0	0	(2, 4)	0	0	0	0	0
(3, 3)	0	0	0	0	0	(3, 4)	256	1754	123	16	1
(4, 3)	0	0	0	0	0	(4, 4)	138	3433	3492	6797	179
(5, 3)	0	0	0	0	0	(5, 4)	4	292	19563	2074	4
(6, 3)	0	0	0	0	0	(6, 4)	1	2	415	1237	4
(7, 3)	0	0	191	53	0	(7, 4)	1	2	119	25	4
(8, 3)	0	0	0	0	0	(8, 4)	133	0	36	48	7
(9, 3)	9562	0	9483	3381	638	(9, 4)	3556	0	0	0	0
(10, 3)	4671	4769	336	212	0	(10, 4)	15626	777	4957	8775	200
(11, 3)	255	1	34	40	0	(11, 4)	25139	47685	11377	7308	881
(12, 3)	4990	0	7808	7083	576	(12, 4)	0	0	0	0	0
(13, 3)	5533	10781	96625	53776	119746	(13, 4)	40995	100183	83297	187925	183589
(14, 3)	7149	24994	91645	75952	217069	(14, 4)	2783	21670	34761	8640	4402
(15, 3)	0	0	0	0	0	(15, 4)	13809	115078	104342	245069	246478
(16, 3)	0	0	0	0	0	(16, 4)	35	5	1222	389	88
(17, 3)	0	0	0	0	0	(17, 4)	8	4	374	21	114
(18, 3)	0	0	0	0	0	(18, 4)	0	0	0	0	0
(19, 3)	0	0	0	0	0	(19, 4)	78	5	1100	22	47
(20, 3)	0	0	0	0	0	(20, 4)	41	1	516	0	38
(21, 3)	0	0	0	0	0	(21, 4)	0	0	0	0	0
(22, 3)	0	0	0	0	0	(22, 4)	0	0	0	0	0
(23, 3)	0	0	0	0	0	(23, 4)	0	0	0	0	0
(24, 3)	0	0	0	0	0	(24, 4)	0	0	0	0	0
(25, 3)	0	0	0	0	0	(25, 4)	0	0	0	0	0
(26, 3)	0	0	0	0	0	(26, 4)	0	0	0	0	0
(27, 3)	0	0	0	0	0	(27, 4)	0	0	0	0	0
(28, 3)	0	0	0	0	0	(28, 4)	0	0	0	0	0
(29, 3)	0	0	0	0	0	(29, 4)	0	0	0	0	0
(30, 3)	0	0	0	0	0	(30, 4)	0	0	0	0	0
(31, 3)	0	0	0	0	0	(31, 4)	1255	15647	13673	256	384
(32, 3)	89	0	3	3	53	(32, 4)	385	761	272	118	118
(33, 3)	0	0	0	0	0	(33, 4)	50	0	0	0	0
(34, 3)	602	1487	6845	111	243	(34, 4)	12891	63834	45254	4780	5376
(35, 3)	0	0	0	0	0	(35, 4)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60MM)

POINT SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1, 5)	2987	0	0	0	0	(1, 6)	0	0	0	0	0
(2, 5)	0	0	0	0	0	(2, 6)	14013	129	1235	346	65
(3, 5)	553	42700	9441	7753	47	(3, 6)	410	57034	12947	12375	5121
(4, 5)	363	25452	24817	8126	52	(4, 6)	721	41759	35804	17163	4579
(5, 5)	31	52	5228	1072	7	(5, 6)	1305	1696	18250	16165	69655
(6, 5)	2	0	437	59	0	(6, 6)	2291	16	1514	431	91
(7, 5)	303	215	3204	271	427	(7, 6)	475	16	1769	112	11
(8, 5)	447	0	877	0	0	(8, 6)	2152	4	2507	112	11
(9, 5)	66	0	0	0	0	(9, 6)	882	0	0	0	1
(10, 5)	2426	20	615	14500	17	(10, 6)	1284	12	4993	3484	144
(11, 5)	10	0	1	87	83	(11, 6)	3707	2026	11389	505	285
(12, 5)	135	66	1102	367	55	(12, 6)	14318	95486	24814	1107	2298
(13, 5)	4343	116	4007	333	1987	(13, 6)	655	12	149	7798	734
(14, 5)	6077	208	1824	1006	1824	(14, 6)	2099	950	1313	380	4080
(15, 5)	3425	427	8272	4179	8272	(15, 6)	109	33	144	2851	459
(16, 5)	13307	128440	73420	73420	36296	(16, 6)	5815	396	3135	516	946
(17, 5)	1695	760	6415	3905	820	(17, 6)	227	98	19024	18424	23304
(18, 5)	28821	97192	78066	37638	261902	(18, 6)	43966	79675	52319	145680	173052
(19, 5)	173874	60258	100046	105310	55779	(19, 6)	2891	225	3058	3256	35023
(20, 5)	17993	48327	49693	19962	38591	(20, 6)	53	1	83	43	494
(21, 5)	1167	3546	1890	514	187	(21, 6)	3584	74651	15366	1655	789
(22, 5)	0	0	0	0	0	(22, 6)	0	0	0	5	0
(23, 5)	0	0	0	0	0	(23, 6)	0	0	0	0	0
(24, 5)	0	0	0	0	0	(24, 6)	0	0	0	0	0
(25, 5)	0	0	0	0	0	(25, 6)	0	0	0	0	0
(26, 5)	0	0	0	0	0	(26, 6)	0	0	0	0	0
(27, 5)	0	0	0	0	0	(27, 6)	0	0	0	0	0
(28, 5)	0	0	0	0	0	(28, 6)	0	0	0	0	0
(29, 5)	61	4	8	0	1	(29, 6)	1709	16962	5064	98	152
(30, 5)	3029	16001	16873	55	91	(30, 6)	26582	254547	45025	825	2397
(31, 5)	826	226	346	46	49	(31, 6)	18381	6306	3061	180	352
(32, 5)	1186	1030	1033	633	689	(32, 6)	407	6524	5337	67	273
(33, 5)	4535	27431	16480	2610	2837	(33, 6)	488	5126	3574	77	129
(34, 5)	444	150	96	119	1638	(34, 6)	0	0	0	0	0
(35, 5)	0	0	0	0	0	(35, 6)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60KM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1, 7)	1	23175	1252	84	1	(1, 8)	0	0	0	0	0
(2, 7)	5256	75103	5161	4711	4042	(2, 9)	2934	13	188	1001	27
(3, 7)	452	22199	10125	12235	131	(3, 0)	26	1801	311	512	10
(4, 7)	891	596	2129	1214	28	(4, 1)	1065	3709	7653	592	58
(5, 7)	908	390	10467	409	1	(5, 2)	4043	97	4274	2766	552
(6, 7)	1244	161	2936	2359	5	(6, 3)	361	62	0	0	0
(7, 7)	7531	0	1115	3524	97	(7, 4)	1	0	3547	83	27
(8, 7)	161	69	3114	426	0	(8, 5)	33364	0	82	314	0
(9, 7)	7412	889	7143	493	25	(9, 6)	815	7623	7853	1490	57
(10, 7)	15915	35176	1212	12578	1677	(10, 7)	8882	8304	9771	31988	219
(11, 7)	32458	296	7607	822	9	(11, 8)	666	40380	22732	13454	870
(12, 7)	3538	2139	11973	2925	61	(12, 9)	3419	11645	2284	1135	15
(13, 7)	7447	43	4623	2565	421	(13, 0)	6550	1726	26818	10131	10492
(14, 7)	1706	2461	719	5538	438	(14, 1)	441	76	9624	32146	3450
(15, 7)	3064	66958	30663	143	5935	(15, 2)	2168	2813	2807	1184	550
(16, 7)	7773	6475	2538	549	4895	(16, 3)	63	11	7089	33989	16234
(17, 7)	6920	21	161	324	61095	(17, 4)	46309	15156	66	81	621
(18, 7)	814	1723	3353	1440	4207	(18, 5)	366	931	15056	2013	2320
(19, 7)	8975	15403	5330	591	24746	(19, 6)	1860	13749	151	124	994
(20, 7)	14502	13396	2990	4750	17513	(20, 7)	1252	6043	4531	2042	369
(21, 7)	6257	95249	58706	7661	9811	(21, 8)	4033	12145	54	2486	1958
(22, 7)	8503	130523	40556	3905	20789	(22, 9)	2454	32744	1872	473	665
(23, 7)	14757	1	1	7659	14930	(23, 0)	118	0	175	85	968
(24, 7)	31	60305	12683	1	54608	(24, 1)	6532	2714	0	0	355
(25, 7)	12589	10892	2451	625	9924	(25, 2)	3243	3653	1312	1460	622
(26, 7)	4148	0	0	335	0	(26, 3)	9608	9701	4592	618	1429
(27, 7)	0	0	0	0	0	(27, 4)	214	102	544	329	137
(28, 7)	0	0	0	0	0	(28, 5)	1420	9539	3112	89	166
(29, 7)	9263	50780	18633	356	545	(29, 6)	15437	9985	2818	1293	13291
(30, 7)	1500	155	237	1876	3412	(30, 7)	2041	25292	19781	473	1012
(31, 7)	10025	52693	26449	240	410	(31, 8)	0	0	0	0	0
(32, 7)	647	10770	13910	0	0	(32, 9)	0	0	0	0	0
(33, 7)	0	0	0	0	0	(33, 0)	0	0	0	0	0
(34, 7)	0	0	0	0	0	(34, 1)	0	0	0	0	0
(35, 7)	0	0	0	0	0	(35, 2)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80KM)

POINT SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1, 9)	0	0	0	0	0	(1, 10)	9	1	3	17	48
(2, 9)	336	0	0	0	0	(2, 10)	5	2	1477	243	20
(3, 9)	801	0	0	0	0	(3, 10)	2093	0	0	0	0
(4, 9)	9502	92	3774	1332	45	(4, 10)	2251	29	51	1	6
(5, 9)	8068	2341	1609	2539	0	(5, 10)	6296	2441	2441	6639	933
(6, 9)	1434	0	135	258	0	(6, 10)	97	0	0	0	0
(7, 9)	1491	53	1032	51	7	(7, 10)	4371	0	0	0	0
(8, 9)	106	0	719	326	23	(8, 10)	46	2	2430	4	69
(9, 9)	51	0	195	1932	0	(9, 10)	2228	12102	1287	18400	37065
(10, 9)	415	0	683	236	0	(10, 10)	3689	5277	3525	11235	35641
(11, 9)	2365	76	836	024	173	(11, 10)	270	0	0	0	0
(12, 9)	585	590	8878	309	230	(12, 10)	0	16	105	71	168
(13, 9)	3023	6129	1072	2536	324	(13, 10)	1280	1618	333	1645	4157
(14, 9)	2468	1920	2373	381	1334	(14, 10)	2123	2356	3539	891	4216
(15, 9)	42523	5672	6569	500	17387	(15, 10)	7642	170	1191	319	500
(16, 9)	16032	20819	26117	7289	42829	(16, 10)	6146	6403	5510	1058	1923
(17, 9)	173	9	45	85	267	(17, 10)	3144	2199	830	747	1879
(18, 9)	3379	5615	8379	749	20893	(18, 10)	502	44	76	163	314
(19, 9)	13662	4696	186	1589	17773	(19, 10)	4513	10	164	205	1603
(20, 9)	8436	3574	1188	1906	3295	(20, 10)	851	46918	19319	202	666
(21, 9)	5286	12804	0	50	1402	(21, 10)	685	299	31	1	1
(22, 9)	175	385	0	0	0	(22, 10)	2040	427	114	0	0
(23, 9)	417	3551	256	3	11	(23, 10)	742	0	0	0	0
(24, 9)	59	2910	0	0	0	(24, 10)	9469	185	37	19	19
(25, 9)	1970	8233	3809	460	17358	(25, 10)	915	6063	1865	31	92
(26, 9)	396	217	505	32	200	(26, 10)	0	0	0	0	0
(27, 9)	1019	2196	1852	186	9895	(27, 10)	108	28	148	73	30
(28, 9)	758	16033	6937	93	648	(28, 10)	7997	35037	13825	1967	28040
(29, 9)	18336	62764	34934	1558	3830	(29, 10)	0	0	0	0	0
(30, 9)	147	204	131	1	3	(30, 10)	0	0	0	0	0
(31, 9)	0	0	0	0	0	(31, 10)	0	0	0	0	0
(32, 9)	0	0	0	0	0	(32, 10)	0	0	0	0	0
(33, 9)	0	0	0	0	0	(33, 10)	0	0	0	0	0
(34, 9)	0	0	0	0	0	(34, 10)	0	0	0	0	0
(35, 9)	0	0	0	0	0	(35, 10)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80MM)

POINT SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,11)	56	11	69	88	991	(1,12)	10749	1	8	86	1014
(2,11)	0	0	0	0	0	(2,12)	0	0	0	0	0
(3,11)	0	0	0	0	0	(3,12)	3	6	729	107	537
(4,11)	3884	4635	17465	19753	171796	(4,12)	1213	336	0	1	0
(5,11)	4856	41100	35595	51012	524388	(5,12)	1355	1008	3796	2905	4
(6,11)	462	1085	387	5892	99230	(6,12)	0	0	0	0	0
(7,11)	13	288	93	1	7	(7,12)	53	4	3109	6	88
(8,11)	1903	0	0	4	0	(8,12)	26070	10	50	90	0
(9,11)	1078	100	22074	7115	741	(9,12)	6049	3013	5119	6344	41319
(10,11)	2227	17	17039	55	404	(10,12)	239	6972	1117	5467	28206
(11,11)	3798	1353	722	3019	28761	(11,12)	17443	7322	13603	4131	2662
(12,11)	0	0	0	0	0	(12,12)	865	118	3793	18	102
(13,11)	5106	2	19	747	2539	(13,12)	4197	1044	460	653	414
(14,11)	1935	64	426	33	126	(14,12)	7259	3	93	646	2093
(15,11)	24232	8296	11795	1940	1918	(15,12)	1016	276	0	268	3307
(16,11)	18795	51	472	495	3011	(16,12)	8314	1415	585	163	365
(17,11)	3222	9100	12687	2836	1217	(17,12)	1397	1206	971	469	1897
(18,11)	2759	41	275	234	1174	(18,12)	7999	76840	40402	5003	6011
(19,11)	2456	84	548	229	1247	(19,12)	3856	4	25	261	5217
(20,11)	19754	132	181	1130	330	(20,12)	1797	147	76	406	5217
(21,11)	12524	60957	25666	496	917	(21,12)	2132	59711	32133	511	3338
(22,11)	46187	190252	50368	6971	47965	(22,12)	285	0	0	0	0
(23,11)	34070	15324	0	0	420	(23,12)	43455	4952	219	864	74837
(24,11)	907	3941	1607	748	227	(24,12)	604	115124	25246	402	8509
(25,11)	217	505	181	72	8	(25,12)	8566	225	863	189	161
(26,11)	2415	17830	6905	164	4918	(26,12)	4663	64224	27911	476	1575
(27,11)	237	9	35	64	31	(27,12)	305	995	463	26	52
(28,11)	7359	11340	1633	272	9903	(28,12)	8178	916	79	50	58
(29,11)	1755	592	557	2	5793	(29,12)	33	35471	15746	978	47016
(30,11)	0	0	0	0	0	(30,12)	0	0	0	0	0
(31,11)	0	0	0	0	0	(31,12)	0	0	0	0	0
(32,11)	0	0	0	0	0	(32,12)	0	0	0	0	0
(33,11)	0	0	0	0	0	(33,12)	0	0	0	0	0
(34,11)	0	0	0	0	0	(34,12)	0	0	0	0	0
(35,11)	0	0	0	0	0	(35,12)	0	0	0	0	0

ANNUAL EMISSION RATES (TONE/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 100M)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	ICO
(1,13)	0	0	0	0	0	(1,14)	678	18500	19836	470	1890
(2,13)	2513	143	304	11	31	(2,14)	2364	2631	1453	2161	20780
(3,13)	0	0	0	0	0	(3,14)	65	0	0	0	2
(4,13)	1397	0	53	1	4	(4,14)	1495	6	243	1	10
(5,13)	781	12	152	27	42	(5,14)	12304	11	3156	9455	105309
(6,13)	1355	0	159	1	1	(6,14)	5710	463	1790	16	93
(7,13)	973	4	253	17	10	(7,14)	1898	0	657	3	0
(8,13)	2031	15	143	7	20	(8,14)	3372	3	243	6	21
(9,13)	68	51979	81	1617	2	(9,14)	6083	1714	4814	2044	631
(10,13)	2099	6590	1895	14458	101227	(10,14)	4221	14878	9291	28235	1378
(11,13)	1373	12	12156	130	346	(11,14)	8761	6675	3042	2495	2798
(12,13)	27550	2241	3748	6	83	(12,14)	16632	57908	11827	329	715
(13,13)	5731	4	3	503	928	(13,14)	3397	77	316	780	1393
(14,13)	1951	1	2	505	1546	(14,14)	4327	1878	1716	4442	2772
(15,13)	400	0	0	100	320	(15,14)	10333	743	1052	4552	7632
(16,13)	1497	157	62	2900	1089	(16,14)	2816	6	22	524	977
(17,13)	5715	52	171	246	694	(17,14)	806	154	283	529	384
(18,13)	8586	6275	1323	9664	16607	(18,14)	5172	71836	13873	1835	2295
(19,13)	1366	195	860	1836	585	(19,14)	4345	765	669	1206	2104
(20,13)	7540	223871	4557	2518	8301	(20,14)	97637	257578	34608	1043	34438
(21,13)	14025	37323	8916	28523	11018	(21,14)	10295	12834	2309	370	874
(22,13)	4461	1245	2300	1035	169	(22,14)	202851	213094	847	580	4824
(23,13)	6873	119426	16926	697	998	(23,14)	23124	9623	438	9323	27253
(24,13)	27079	188008	43202	596	2031	(24,14)	1713	31242	174	58	31
(25,13)	353	279	49	31	5	(25,14)	1153	301	134	233	309
(26,13)	146	1	126	373	4	(26,14)	522	1417	927	491	73
(27,13)	10793	37224	16494	830	10350	(27,14)	2902	3503	2912	956	5768
(28,13)	7426	13404	9065	241	863	(28,14)	5759	47741	27250	1507	2405
(29,13)	3880	15879	12358	4055	1427	(29,14)	32115	8946	2714	339	1709
(30,13)	6092	17683	5546	1053	25955	(30,14)	15171	85510	28693	14523	50504
(31,13)	0	0	0	0	0	(31,14)	0	0	0	0	0
(32,13)	0	0	0	0	0	(32,14)	0	0	0	0	0
(33,13)	0	0	0	0	0	(33,14)	0	0	0	0	0
(34,13)	0	0	0	0	0	(34,14)	0	0	0	0	0
(35,13)	0	0	0	0	0	(35,14)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60MM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,15)	1408	10508	10115	218	545	(1,16)	2998	5294	8136	1004	525
(2,15)	334	159	108	7	13	(2,16)	1	0	16	2	0
(3,15)	105	0	0	0	0	(3,16)	0	0	0	0	0
(4,15)	1694	0	14	1	8	(4,16)	1643	5	297	8	49
(5,15)	5988	58	341	251	3696	(5,16)	2098	5	1045	6	42
(6,15)	804	0	0	0	0	(6,16)	2347	1	797	4	25
(7,15)	1886	0	543	3	20	(7,16)	2709	20	701	25	160
(8,15)	5554	1155	7841	64	733	(8,16)	496	0	0	0	0
(9,15)	3703	1735	3006	2778	497	(9,16)	805	293	3116	87	91
(10,15)	809	24	88	2	7	(10,16)	343	0	0	0	0
(11,15)	3955	3484	648	6	321	(11,16)	23149	9596	26044	17782	9553
(12,15)	26632	1060	29745	14618	601	(12,16)	3213	1295	1521	209	166
(13,15)	280	4	13	12	23	(13,16)	4492	131016	4553	321	923
(14,15)	1493	14	85	285	734	(14,16)	4333	47	233	3282	3442
(15,15)	15175	768	442	6235	12119	(15,16)	12662	519	416	4824	7962
(16,15)	72881	60610	12722	8846	13161	(16,16)	16568	114969	3417	750	300
(17,15)	3392	288	342	96	403	(17,16)	7659	477293	129872	956	3407
(18,15)	64564	429050	105256	1530	12954	(18,16)	13831	8002	3225	31	89
(19,15)	69181	7759	2768	10416	1763	(19,16)	13590	44451	65	228	124
(20,15)	6774	287816	32056	1218	2302	(20,16)	51700	477032	158018	2440	4673
(21,15)	28286	225187	31574	45487	9212	(21,16)	9817	42	131	3021	922
(22,15)	3247	79	249	1032	3340	(22,16)	4976	10	27	2459	1614
(23,15)	53632	188689	63281	2384	13757	(23,16)	3810	1095	728	2936	3204
(24,15)	4127	6618	3008	1736	30102	(24,16)	7584	7278	2861	2431	668
(25,15)	9033	11174	4558	334	18767	(25,16)	15182	7143	3172	718	395
(26,15)	13400	24238	1382	7494	2268	(26,16)	6663	23736	11656	1113	551
(27,15)	2953	3985	2230	4240	2895	(27,16)	89010	196500	30323	2182	10810
(28,15)	12465	11076	3683	2915	72713	(28,16)	5423	3320	1853	384	498
(29,15)	29936	13461	9486	4437	13070	(29,16)	15531	866	451	379	93
(30,15)	1095	8123	6287	308	2801	(30,16)	3195	6728	3808	226	3717
(31,15)	0	0	0	0	0	(31,16)	36565	44633	14367	8428	28883
(32,15)	0	0	0	0	0	(32,16)	0	0	0	0	0
(33,15)	0	0	0	0	0	(33,16)	0	0	0	0	0
(34,15)	0	0	0	0	0	(34,16)	0	0	0	0	0
(35,15)	0	0	0	0	0	(35,16)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60KM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,17)	2930	8566	9618	3522	19179	(1,18)	1532	7011	1156	2	6
(2,17)	1039	23250	23008	442	1416	(2,18)	257	4	6	1	1
(3,17)	0	0	0	0	0	(3,18)	433	24	64	11	17
(4,17)	2566	504	3468	12	91	(4,18)	8881	12	295	3	0
(5,17)	1086	0	5	0	0	(5,18)	495	0	0	0	65
(6,17)	4106	113	124	11	50	(6,18)	43858	596	1955	16	43
(7,17)	3138	674	1826	15679	260	(7,18)	20115	362	1101	21523	36
(8,17)	9143	2654	372	57	23	(8,18)	6592	24	855	7722	579
(9,17)	4405	163	324	1	10	(9,18)	7356	14478	8586	246	175
(10,17)	4070	16	306	20	125	(10,18)	4373	69	749	114	14
(11,17)	7423	798	1180	449	173	(11,18)	1774	980	613	0	3
(12,17)	41683	136027	52495	30419	59901	(12,18)	6059	66	44	308	99
(13,17)	2236	1023	203	81	26	(13,18)	3708	1947	333	214	6
(14,17)	10142	109846	14088	1285	1437	(14,18)	3112	0	16	20	5163
(15,17)	4120	7373	1270	1307	172	(15,18)	24051	4848	24239	10879	490
(16,17)	96294	688029	136694	74143	194108	(16,18)	8751	54047	13740	151	2131
(17,17)	6464	20498	3814	2127	2306	(17,18)	22948	31615	116001	639	0
(18,17)	1381	3522	920	24	56	(18,18)	2626	0	2	0	2563
(19,17)	20051	192735	38892	11356	21086	(19,18)	75767	224398	58001	3916	214
(20,17)	24183	238256	41165	6610	10928	(20,18)	5160	4472	1310	3718	3149
(21,17)	7331	7459	606	18143	104	(21,18)	155613	422073	95811	62589	1309
(22,17)	7794	62	5718	1141	37	(22,18)	28194	79044	16098	12799	314
(23,17)	27320	33738	7639	2915	475	(23,18)	8921	8595	4854	1567	546
(24,17)	170573	107148	58306	14434	4695	(24,18)	32840	201	131	524	2774
(25,17)	65864	2314	858	14434	12654	(25,18)	67247	25747	17567	3001	74
(26,17)	2653	1336	489	176	403	(26,18)	7064	446	291	534	3493
(27,17)	2638	2178	1066	1681	333	(27,18)	10592	5960	28721	5396	1493
(28,17)	21403	26616	12493	45532	16901	(28,18)	18045	30050	16262	2001	2905
(29,17)	22235	23000	7718	1168	2304	(29,18)	6071	73117	26926	1551	2169
(30,17)	1885	3132	1237	343	92	(30,18)	2808	21502	9817	1551	10179
(31,17)	771	901	431	36	117	(31,18)	3866	15198	3359	790	0
(32,17)	54	367	74	6	12	(32,18)	24	0	0	0	0
(33,17)	0	0	0	0	0	(33,18)	0	0	0	0	0
(34,17)	0	0	0	0	0	(34,18)	0	0	0	0	0
(35,17)	0	0	0	0	0	(35,18)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60KM)

POINT SOURCE EMISSIONS:

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,19)	0	0	0	0	0	(1,20)	0	0	0	0	0
(2,19)	2577	407	1695	141	4691	(2,20)	0	0	0	0	0
(3,19)	1095	64	281	19	37	(3,20)	886	9	121	21	34
(4,19)	121	0	0	0	0	(4,20)	0	0	0	0	0
(5,19)	15	0	0	0	0	(5,20)	103	0	0	0	0
(6,19)	1411	3	3	0	2	(6,20)	104	0	0	0	0
(7,19)	3074	0	0	0	0	(7,20)	847	0	13	0	2
(8,19)	9745	4	30	61	3	(8,20)	2634	24	166	65	174
(9,19)	26728	344	1548	157	500	(9,20)	17564	16308	11244	218	579
(10,19)	35977	16353	19999	14622	11266	(10,20)	4289	22	164	29	0
(11,19)	731	776	46	1	3	(11,20)	3152	29	57	2	3
(12,19)	966	1037	101	6	13	(12,20)	25591	32777	11192	712	979
(13,19)	736	55	220	15	63	(13,20)	8164	14713	6016	36703	2464
(14,19)	28282	33803	1342	28	68	(14,20)	20733	24791	11741	1599	767
(15,19)	38560	67623	6730	1635	663	(15,20)	82876	572547	162952	80762	7445
(16,19)	33456	56967	15363	309	529	(16,20)	54486	2611	4041	441	619
(17,19)	15998	8611	1883	729	2717	(17,20)	12935	26683	478	266	866
(18,19)	28786	210494	4560	388	167	(18,20)	8532	21719	28466	2196	59980
(19,19)	7911	36345	9603	4562	3654	(19,20)	26243	153769	26395	14029	9441
(20,19)	154688	461761	112290	8131	1277	(20,20)	2986	57537	3612	4852	12046
(21,19)	79203	181766	40703	13235	3728	(21,20)	43962	58758	42335	21313	0
(22,19)	8241	162832	42466	54575	10243	(22,20)	28619	396565	118513	799	12500
(23,19)	58723	91706	35333	30613	11613	(23,20)	51261	137259	65716	1276	4328
(24,19)	3994	25720	13184	7948	8118	(24,20)	37924	181	181	121	331
(25,19)	80645	22983	8558	3707	685	(25,20)	1981	378	545	545	2005
(26,19)	41497	3845	506	1518	1630	(26,20)	9331	12019	6804	6748	17357
(27,19)	6499	916	506	111	12174	(27,20)	16891	10810	3750	17357	1024
(28,19)	5395	7804	327	2136	872	(28,20)	18316	13773	7403	8610	16875
(29,19)	12670	11233	5067	10741	20006	(29,20)	15519	146743	53527	26930	52325
(30,19)	10130	11233	10	3	15	(30,20)	10	97	22408	43321	11
(31,19)	172	2	10	0	0	(31,20)	0	0	118	5	0
(32,19)	0	0	0	0	0	(32,20)	0	0	0	0	0
(33,19)	0	0	0	0	0	(33,20)	0	0	0	0	0
(34,19)	0	0	0	0	0	(34,20)	0	0	0	0	0
(35,19)	0	0	0	0	0	(35,20)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60MI)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,21)	0	0	0	0	0	(1,22)	0	0	0	0	0
(2,21)	637	349	173	67	178	(2,22)	1919	534	675	471	5054
(3,21)	0	0	0	0	0	(3,22)	9771	4036	1629	546	87
(4,21)	120	0	0	0	0	(4,22)	0	0	0	0	1
(5,21)	0	0	0	0	0	(5,22)	0	0	0	0	0
(6,21)	608	1	1	1	1	(6,22)	136	0	0	0	0
(7,21)	295	0	0	0	0	(7,22)	202	147	172	10	23
(8,21)	2594	24	231	236	77	(8,22)	978	0	0	0	0
(9,21)	6189	1027	2486	47	97	(9,22)	5492	2479	2284	1813	115
(10,21)	2328	41	533	12	66	(10,22)	5496	4925	1374	51	56
(11,21)	10013	2297	2343	9893	116	(11,22)	38642	93	550	1845	5909
(12,21)	9406	9073	7118	130	447	(12,22)	12169	14481	1653	62	23
(13,21)	18718	13376	12463	378	19002	(13,22)	3575	94	340	26	5254
(14,21)	14235	25872	51401	23215	8732	(14,22)	2750	58100	19848	359	4322
(15,21)	25104	105468	3959	1336	10301	(15,22)	9351	5032	820	15	824
(16,21)	9105	13581	51401	58660	79992	(16,22)	74250	46231	17444	75602	33115
(17,21)	111946	204653	69041	6280	26883	(17,22)	135755	45400	22506	59951	7740
(18,21)	35254	13296	3391	6280	26883	(18,22)	2061	528566	430433	99854	1140655
(19,21)	8750	7114	861	871	326	(19,22)	2061	5327	1331	10862	5662
(20,21)	12573	16137	3595	12501	9313	(20,22)	4714	2606	1147	17671	8624
(21,21)	5121	7576	74857	3545	3393	(21,22)	15492	25750	5259	4862	3039
(22,21)	14090	11075	2262	351	1288	(22,22)	50367	12278	1172	1211	2520
(23,21)	17765	33615	5655	1097	5440	(23,22)	7139	5306	1108	1622	8261
(24,21)	120405	551158	105162	1159	9301	(24,22)	39167	221451	38242	670	9821
(25,21)	3986	76409	5464	1132	408	(25,22)	190250	614343	119347	6318	38180
(26,21)	5117	222656	123783	752	12711	(26,22)	13652	194429	64748	1611	3552
(27,21)	2620	304	58	119	12	(27,22)	15143	184350	53155	1767	4633
(28,21)	19283	1377	725	930	128	(28,22)	80831	61360	20484	1264	2377
(29,21)	4860	4676	794	3635	232	(29,22)	16727	181036	50793	11856	12504
(30,21)	3585	5422	2110	699	13059	(30,22)	4648	70458	20124	363	963
(31,21)	6560	71683	12782	4237	57061	(31,22)	87	695	239	44	15
(32,21)	0	0	0	0	0	(32,22)	0	0	0	0	0
(33,21)	0	0	0	0	0	(33,22)	0	0	0	0	0
(34,21)	0	0	0	0	0	(34,22)	0	0	0	0	0
(35,21)	0	0	0	0	0	(35,22)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60MM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,23)	0	0	0	0	0	(1,24)	0	0	0	0	0
(2,23)	1256	2	18	202	2394	(2,24)	5680	0	0	0	0
(3,23)	0	0	0	0	0	(3,24)	0	0	0	0	0
(4,23)	221	0	0	0	0	(4,24)	0	0	0	0	0
(5,23)	306	0	0	0	0	(5,24)	462	428	163	13	25
(6,23)	84	0	0	0	0	(6,24)	120	0	0	0	0
(7,23)	1130	35	34	0	0	(7,24)	4462	55	93	335	13
(8,23)	546	0	0	0	0	(8,24)	1311	1	7	1685	93
(9,23)	1978	558	94	132	60	(9,24)	6660	2073	1032	17	60
(10,23)	2127	0	0	0	0	(10,24)	7656	1530	885	22	78
(11,23)	5109	2000	1540	1735	63	(11,24)	5438	640	442	78396	113
(12,23)	995	2446	1749	288	71	(12,24)	7611	8228	3909	85505	52798
(13,23)	2843	5556	1877	1767	1105	(13,24)	35755	36320	5679	105	404
(14,23)	24069	59396	8849	1463	730	(14,24)	1957	0	3	45	362
(15,23)	467	589	133	10	137	(15,24)	4315	31419	7117	318	6911
(16,23)	4073	12356	5137	389	2206	(16,24)	2749	5532	1633	406	12186
(17,23)	82378	199496	49203	12258	14362	(17,24)	5356	94931	38778	21537	4818
(18,23)	0	0	0	0	0	(18,24)	2572	99108	15296	2864	12989
(19,23)	3231	12451	7741	4704	2007	(19,24)	22588	110994	17136	16734	1798
(20,23)	787	3517	3654	10596	5400	(20,24)	3534	66385	11751	17358	59222
(21,23)	27540	353974	69361	14736	4298	(21,24)	39814	124420	78608	97248	113841
(22,23)	84737	149480	25248	15438	23388	(22,24)	14032	31597	18946	16550	18293
(23,23)	110732	314653	63843	25711	50885	(23,24)	11204	215540	33804	1336	1829
(24,23)	134252	233022	38803	77463	121892	(24,24)	25454	86726	13111	13141	1022
(25,23)	153549	519641	204036	14288	67725	(25,24)	10140	24275	5233	368	513
(26,23)	110367	1165719	234224	6381	43582	(26,24)	18403	70045	15370	1071	981
(27,23)	17799	3219	803	21	72	(27,24)	65059	23424	7129	218	2468
(28,23)	40852	69961	9966	164	7797	(28,24)	40080	26220	9446	233	338
(29,23)	24880	65249	65437	129596	105228	(29,24)	47293	530139	123647	4432	24475
(30,23)	931	12964	4008	668	256	(30,24)	51844	388510	117222	179133	222202
(31,23)	2913	26075	7554	256	42	(31,24)	5433	34885	6814	123	3124
(32,23)	2	0	0	0	0	(32,24)	0	0	0	0	0
(33,23)	0	0	0	0	0	(33,24)	0	0	0	0	0
(34,23)	0	0	0	0	0	(34,24)	0	0	0	0	0
(35,23)	0	0	0	0	0	(35,24)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80MM)

POINT SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,25)	0	0	0	0	0	(1,26)	0	0	0	0	0
(2,25)	38	0	52	1	7	(2,26)	79	0	0	0	0
(3,25)	1324	1	1	1	1	(3,26)	1094	394	379	25	44
(4,25)	503	0	0	0	0	(4,26)	758	19420	12892	250	793
(5,25)	95	0	0	0	0	(5,26)	1327	5584	2726	861	89
(6,25)	249	0	0	0	0	(6,26)	946	170	106	7	14
(7,25)	517	0	0	0	0	(7,26)	835	2	4	0	1
(8,25)	2140	124	43	50	134	(8,26)	4567	381	364	18	43
(9,25)	268	0	0	0	0	(9,26)	2350	7926	4562	110	376
(10,25)	5075	883	339	1138	1190	(10,26)	236	61	27	2	4
(11,25)	175	1589	313	28	23	(11,26)	11	0	0	0	0
(12,25)	1860	69756	40355	346	770	(12,26)	1474	3553	915	75	90
(13,25)	2463	2149	842	40	576	(13,26)	0	0	0	0	0
(14,25)	8080	4100	3731	110	1070	(14,26)	1446	5303	2808	84	178
(15,25)	28972	30303	45850	4000	16485	(15,26)	4086	1061	644	60	94
(16,25)	16281	120197	37543	141	315	(16,26)	9331	6372	1790	319	417
(17,25)	27650	9674	2107	161	4204	(17,26)	121	10	8	64	268
(18,25)	1711	6382	1986	595	750	(18,26)	451	1087	442	124	87
(19,25)	158	360	480	750	32	(19,26)	36	171	187	20	62
(20,25)	49419	162376	48870	7652	79992	(20,26)	2203	16911	187	1133	4
(21,25)	218	479	616	782	5696	(21,26)	3090	23274	6914	8747	696
(22,25)	40051	633924	134502	31737	4622	(22,26)	0	0	0	0	0
(23,25)	128	619	417	48	36	(23,26)	104	1336	390	26	9
(24,25)	7647	47806	7066	1874	1241	(24,26)	18871	148022	50870	18393	21508
(25,25)	17440	20637	20141	2220	22680	(25,26)	43578	38119	37978	10900	100742
(26,25)	6788	13111	3707	351	387	(26,26)	19743	20	721	525	84
(27,25)	4195	14529	3265	270	508	(27,26)	1602	11640	8943	1071	2753
(28,25)	33710	167922	23362	432	5212	(28,26)	13466	14	475	3185	30
(29,25)	70076	82399	19374	12278	72463	(29,26)	65246	48419	14644	310	2813
(30,25)	43853	106230	77484	15022	50554	(30,26)	26209	236584	178524	144917	102878
(31,25)	2255	1436	2202	65	39	(31,26)	0	87454	152624	15639	43476
(32,25)	0	0	0	0	0	(32,26)	0	0	0	0	0
(33,25)	0	0	0	0	0	(33,26)	0	0	0	0	0
(34,25)	0	0	0	0	0	(34,26)	0	0	0	0	0
(35,25)	0	0	0	0	0	(35,26)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80MM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,27)	3	0	26	2	1	(1,28)	0	0	0	0	0
(2,27)	6545	16186	2729	322	203	(2,28)	223	0	0	0	0
(3,27)	108	0	0	1	0	(3,28)	436	5529	159	11	6
(4,27)	4608	819	1840	31	105	(4,28)	723	43	34	4	4
(5,27)	406	0	0	0	0	(5,28)	469	111	70	4	8
(6,27)	3094	13	7	0	0	(6,28)	995	0	17	0	1
(7,27)	823	53	11	1	1	(7,28)	2288	568	133	31	78
(8,27)	6268	2468	1806	89	205	(8,28)	2173	0	348	29	76
(9,27)	0	0	0	0	0	(9,28)	0	0	0	0	0
(10,27)	0	0	0	0	0	(10,28)	3260	0	1603	71	4073
(11,27)	9435	32352	16085	283	947	(11,28)	11488	0	3217	59	347
(12,27)	5607	5380	943	1494	734	(12,28)	88031	11924	7244	173	20236
(13,27)	1284	5827	2036	55	125	(13,28)	0	0	0	0	0
(14,27)	5427	83507	1798	247	290	(14,28)	0	0	0	0	0
(15,27)	0	0	0	0	0	(15,28)	515	1250	686	29	228
(16,27)	31433	17362	5101	638	690	(16,28)	21	13712	4433	76	252
(17,27)	1739	3007	3190	270	290	(17,28)	401	24	83	17	18
(18,27)	113	2438	504	0	0	(18,28)	0	0	33	32	94
(19,27)	1796	5142	3271	370	332	(19,28)	52	749	192	7	0
(20,27)	28562	27145	5003	744	104	(20,28)	258	3537	1145	79	7
(21,27)	5	35	46	6	0	(21,28)	307	2244	801	39	2
(22,27)	234	2037	1075	1451	4412	(22,28)	0	0	0	0	0
(23,27)	0	0	0	0	0	(23,28)	0	0	0	0	0
(24,27)	13707	202804	54889	26378	5047	(24,28)	0	0	0	0	0
(25,27)	1689	348	914	1376	399	(25,28)	0	0	0	0	0
(26,27)	18367	47659	61920	33460	3495	(26,28)	12670	38762	59574	4778	4431
(27,27)	39471	49561	32722	1473	1474	(27,28)	3816	1479	1752	1011	202
(28,27)	10055	12270	9858	1719	913	(28,28)	12866	19828	16350	5155	833
(29,27)	752	49	206	66	38	(29,28)	4071	3704	3727	2889	3757
(30,27)	9584	18528	53773	4718	2045	(30,28)	29388	82991	33338	20309	10353
(31,27)	11048	75222	36154	11523	1894	(31,28)	4651	27112	7608	11905	2040
(32,27)	44	0	93	56	9	(32,28)	14	139	27	9	22
(33,27)	0	0	0	0	0	(33,28)	0	0	0	0	0
(34,27)	0	0	0	13	0	(34,28)	0	0	0	0	0
(35,27)	0	0	0	0	0	(35,28)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 0.0001)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1.29)	0	0	0	0	0	(1.30)	3911	95	749	907	3825
(2.29)	0	0	0	0	0	(2.30)	0	0	0	0	0
(3.29)	56383	29510	22213	393	1242	(3.30)	0	0	0	0	0
(4.29)	0	0	0	0	0	(4.30)	0	0	0	0	0
(5.29)	0	0	0	0	0	(5.30)	2742	1391	2186	11	35
(6.29)	36	0	0	0	0	(6.30)	0	0	0	0	0
(7.29)	57	0	0	0	0	(7.30)	9054	1474	834	88	3866
(8.29)	765	0	0	0	0	(8.30)	0	0	0	0	0
(9.29)	229	6	13	59	43	(9.30)	0	0	0	0	0
(10.29)	0	0	0	0	0	(10.30)	0	0	0	0	0
(11.29)	0	0	0	0	0	(11.30)	0	0	0	0	0
(12.29)	0	0	0	0	0	(12.30)	0	0	0	0	0
(13.29)	0	0	0	0	0	(13.30)	17850	17850	4465	0	0
(14.29)	0	0	0	0	0	(14.30)	0	0	0	0	0
(15.29)	0	0	0	0	0	(15.30)	0	0	0	0	0
(16.29)	0	0	0	0	0	(16.30)	0	0	0	0	0
(17.29)	0	6	0	0	0	(17.30)	2670	26000	17850	0	0
(18.29)	0	0	0	0	0	(18.30)	0	0	0	0	0
(19.29)	125000	51600	44606	0	0	(19.30)	0	0	0	0	0
(20.29)	1	0	0	0	0	(20.30)	17850	120500	4465	0	0
(21.29)	0	0	0	0	0	(21.30)	0	0	0	0	0
(22.29)	0	0	0	0	0	(22.30)	0	0	0	0	0
(23.29)	0	0	0	0	0	(23.30)	0	0	0	0	0
(24.29)	0	0	0	0	0	(24.30)	0	0	0	0	0
(25.29)	0	0	0	0	0	(25.30)	0	0	0	0	0
(26.29)	0	0	0	0	0	(26.30)	0	0	0	0	0
(27.29)	72315	368	2804	860	212	(27.30)	5905	916	964	165	229
(28.29)	16	0	2	11	274	(28.30)	246	1328	430	519	74
(29.29)	1986	105	2845	21089	0	(29.30)	1701	2851	1447	2039	171
(30.29)	961	3103	929	2322	2662	(30.30)	9	26	44	277	4
(31.29)	15056	21349	8463	9865	14934	(31.30)	1200	6627	2870	1253	1903
(32.29)	18745	173685	90245	59336	23696	(32.30)	1061	13340	10675	3105	1417
(33.29)	1565	31296	8745	615	2089	(33.30)	0	0	0	0	0
(34.29)	0	0	0	0	0	(34.30)	0	0	0	0	0
(35.29)	0	0	0	0	0	(35.30)	0	0	0	0	0

SECTION D-2

GRIDDED AREA SOURCE EMISSION (TONS/YEAR) ON THE 80-KM GRID NETWORK

ARE A SOURCE EMISSIONS

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ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 36 BY 30 US-CANADIAN GRID
(GRID SPACING = 80KM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1, 3)	0	0	0	0	0	(1, 4)	U	0	0	0	0
(2, 3)	93	130	1128	560	2482	(2, 4)	28	28	292	289	1445
(3, 3)	97	95	955	1013	3446	(3, 4)	0	0	0	0	0
(4, 3)	0	0	0	0	0	(4, 4)	191	119	1741	1555	9310
(5, 3)	59	79	723	300	1531	(5, 4)	62	23	493	774	4091
(6, 3)	4724	994	3660	12294	19810	(6, 4)	51	51	843	1014	5539
(7, 3)	24	12	212	333	2225	(7, 4)	53	21	444	671	3606
(8, 3)	244	160	2044	2176	10485	(8, 4)	46	72	397	568	3333
(9, 3)	9314	4478	40481	57959	211777	(9, 4)	201	121	1823	1741	8841
(10, 3)	656	389	5874	6271	29603	(10, 4)	3695	1590	17209	25294	104747
(11, 3)	154	96	1288	1468	7739	(11, 4)	622	406	5819	5851	28309
(12, 3)	653	471	5372	5840	29372	(12, 4)	492	313	4389	5016	24482
(13, 3)	578	420	5174	5036	23874	(13, 4)	15310	12399	108054	132515	509603
(14, 3)	1444	1549	11436	12169	49962	(14, 4)	3229	493	6698	8635	37808
(15, 3)	0	0	0	0	0	(15, 4)	161	195	1501	1671	76337
(16, 3)	0	0	0	0	0	(16, 4)	0	0	0	0	0
(17, 3)	0	0	0	0	0	(17, 4)	0	0	0	0	0
(18, 3)	0	0	0	0	0	(18, 4)	807	397	4710	6508	29196
(19, 3)	0	0	0	0	0	(19, 4)	0	0	0	0	0
(20, 3)	0	0	0	0	0	(20, 4)	0	0	0	0	0
(21, 3)	0	0	0	0	0	(21, 4)	0	0	0	0	0
(22, 3)	0	0	0	0	0	(22, 4)	0	0	0	0	0
(23, 3)	0	0	0	0	0	(23, 4)	0	0	0	0	0
(24, 3)	0	0	0	0	0	(24, 4)	0	0	0	0	0
(25, 3)	0	0	0	0	0	(25, 4)	0	0	0	0	0
(26, 3)	0	0	0	0	0	(26, 4)	0	0	0	0	0
(27, 3)	0	0	0	0	0	(27, 4)	0	0	0	0	0
(28, 3)	0	0	0	0	0	(28, 4)	0	0	0	0	0
(29, 3)	0	0	0	0	0	(29, 4)	0	0	0	0	0
(30, 3)	0	0	0	0	0	(30, 4)	0	0	0	0	0
(31, 3)	0	0	0	0	0	(31, 4)	3177	538	6431	13738	65929
(32, 3)	1502	183	2361	5602	28556	(32, 4)	826	50	873	2054	10586
(33, 3)	0	0	0	0	0	(33, 4)	0	0	0	0	0
(34, 3)	0	0	0	0	0	(34, 4)	9253	7953	70269	139702	666579
(35, 3)	0	0	0	0	0	(35, 4)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80MM)

AREA SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID FT	PART	S02	NOX	HC	CO
(1, 5)	150	92	1498	1674	7450	(1, 6)	0	0	0	0	0
(2, 5)	93	82	1025	1024	4400	(2, 6)	0	0	0	0	0
(3, 5)	366	245	3265	3465	15443	(3, 6)	83	55	680	820	3663
(4, 5)	48	21	397	561	2474	(4, 6)	839	617	6821	6338	30845
(5, 5)	77	78	798	540	2359	(5, 6)	6005	1461	9708	20672	54332
(6, 5)	0	0	0	0	0	(6, 6)	212	136	1999	2286	11107
(7, 5)	1083	724	5809	7024	32223	(7, 6)	385	332	3670	3376	16122
(8, 5)	98	61	850	932	5210	(8, 6)	353	759	3026	3330	16334
(9, 5)	393	294	3690	4195	20668	(9, 6)	282	159	2434	3041	16143
(10, 5)	2474	1036	12033	15908	66258	(10, 6)	2177	1393	16688	19501	85209
(11, 5)	373	340	3268	3268	16225	(11, 6)	303	181	2604	3057	16619
(12, 5)	646	391	5051	5825	27965	(12, 6)	994	429	5755	6604	31466
(13, 5)	1102	259	4198	5557	25851	(13, 6)	1642	519	6127	6382	31357
(14, 5)	1035	325	3709	4184	20121	(14, 6)	1120	684	6172	6017	26596
(15, 5)	910	1780	23198	32105	149728	(15, 6)	1655	164	2390	4516	23711
(16, 5)	3296	247	4161	8454	47494	(16, 6)	3781	916	8065	15178	57164
(17, 5)	2210	1211	15541	20701	107964	(17, 6)	2424	787	12143	16463	86832
(18, 5)	2143	1243	15469	15161	72777	(18, 6)	3158	2152	19842	22602	108987
(19, 5)	1503	995	11442	12088	54701	(19, 6)	9619	166	11967	25624	133987
(20, 5)	10077	7955	65003	79085	379803	(20, 6)	472	53	594	2222	10563
(21, 5)	0	0	0	0	0	(21, 6)	0	0	0	0	0
(22, 5)	0	0	0	0	0	(22, 6)	0	0	0	0	0
(23, 5)	0	0	0	0	0	(23, 6)	0	0	0	0	0
(24, 5)	0	0	0	0	0	(24, 6)	0	0	0	0	0
(25, 5)	0	0	0	0	0	(25, 6)	0	0	0	0	0
(26, 5)	0	0	0	0	0	(26, 6)	0	0	0	0	0
(27, 5)	0	0	0	0	0	(27, 6)	0	0	0	0	0
(28, 5)	0	0	0	0	0	(28, 6)	0	0	0	0	0
(29, 5)	0	0	0	0	0	(29, 6)	3178	2147	13439	37299	175890
(30, 5)	4712	801	9079	13315	87726	(30, 6)	5057	3144	25718	48240	233324
(31, 5)	3790	102	1301	6241	24082	(31, 6)	8354	810	10704	24984	111196
(32, 5)	4162	138	2363	7975	30846	(32, 6)	4329	308	4968	11976	54406
(33, 5)	1925	1349	14217	25511	136386	(33, 6)	3023	318	4612	9681	43608
(34, 5)	0	0	0	0	0	(34, 6)	0	0	0	0	0
(35, 5)	0	0	0	0	0	(35, 6)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 90KM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1, 7)	0	0	0	0	0	(1, 8)	0	0	0	0	0
(2, 7)	196	215	2778	1050	14893	(2, 8)	487	327	3123	3617	1750
(3, 7)	526	344	3948	3782	18306	(3, 8)	0	0	0	0	0
(4, 7)	191	101	1739	1627	8578	(4, 8)	673	394	5990	5287	20497
(5, 7)	242	137	2147	2037	11037	(5, 8)	11813	3114	13894	39597	106690
(6, 7)	296	209	2721	2716	13652	(6, 8)	100	55	580	1265	6695
(7, 7)	2265	1136	10601	10417	38668	(7, 8)	260	178	2442	2459	13025
(8, 7)	480	243	4455	5215	25176	(8, 8)	228	195	2165	2528	12372
(9, 7)	835	439	4430	5223	21794	(9, 8)	233	129	1968	2338	11342
(10, 7)	856	490	7123	8102	38070	(10, 8)	7024	4685	8593	63993	275598
(11, 7)	1421	987	13036	12657	59074	(11, 8)	11647	9379	85057	102473	435406
(12, 7)	278	208	2548	2431	11525	(12, 8)	941	383	5991	7832	38081
(13, 7)	2499	1007	12416	15124	71681	(13, 8)	1645	882	9990	9815	45524
(14, 7)	950	289	3451	4068	20700	(14, 8)	5722	1796	19566	28886	134279
(15, 7)	1634	428	6607	9046	46151	(15, 8)	2229	610	10553	13128	66667
(16, 7)	414	178	2572	2525	14431	(16, 8)	2718	787	9908	14741	69816
(17, 7)	1332	413	6265	8339	40380	(17, 8)	863	435	6143	7577	40518
(18, 7)	1248	128	2373	3680	16112	(18, 8)	3812	1105	17232	24446	106132
(19, 7)	2167	418	8485	11456	57603	(19, 8)	1085	149	3221	4624	20821
(20, 7)	4529	430	7252	15051	75049	(20, 8)	1567	262	5463	7856	37774
(21, 7)	1363	418	19814	32137	51238	(21, 8)	2565	610	3532	6316	30219
(22, 7)	7414	3398	12441	32157	104547	(22, 8)	0	0	0	0	0
(23, 7)	9003	1893	0	0	100586	(23, 8)	5895	1661	10178	19932	81358
(24, 7)	0	535	4507	9651	40946	(24, 8)	1796	419	3215	5885	27049
(25, 7)	1886	106	880	2743	9729	(25, 8)	1573	183	2705	5049	22121
(26, 7)	622	0	0	0	0	(26, 8)	1609	611	6800	13655	61617
(27, 7)	0	0	0	0	0	(27, 8)	1203	104	1641	3698	16486
(28, 7)	231	33	466	972	4142	(28, 8)	1277	105	1492	3272	14671
(29, 7)	1613	126	2075	4730	20114	(29, 8)	2880	570	7623	14201	71380
(30, 7)	318	0	4999	9128	43265	(30, 8)	4052	439	6873	13845	63437
(31, 7)	2785	1686	16138	28363	148740	(31, 8)	3466	944	11490	21427	105403
(32, 7)	1930	912	9417	17633	67580	(32, 8)	0	0	0	0	0
(33, 7)	0	0	0	0	0	(33, 8)	0	0	0	0	0
(34, 7)	0	0	0	0	0	(34, 8)	0	0	0	0	0
(35, 7)	0	0	0	0	0	(35, 8)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80MM)

AREA SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1, 9)	192	56	977	1293	6327	(1, 10)	227	63	1461	1947	8826
(2, 9)	52	23	409	583	2757	(2, 10)	0	0	0	0	0
(3, 9)	105	114	1409	1532	8568	(3, 10)	1113	510	4821	6147	26482
(4, 9)	847	512	7789	6370	37408	(4, 10)	258	181	2324	1957	11698
(5, 9)	316	646	8476	6584	39224	(5, 10)	437	204	3263	4107	20395
(6, 9)	103	93	1046	1072	5365	(6, 10)	380	252	3321	3695	18615
(7, 9)	150	137	1474	1329	6777	(7, 10)	2331	585	3254	8342	25117
(8, 9)	6054	1605	10446	21166	57075	(8, 10)	1419	551	6466	11977	57024
(9, 9)	576	272	4072	5249	25498	(9, 10)	441	159	7274	4218	21853
(10, 9)	495	239	3197	4437	20665	(10, 10)	1447	825	7224	11163	54547
(11, 9)	3252	1324	11363	15597	57845	(11, 10)	412	134	1553	2545	11760
(12, 9)	523	305	3652	3939	19793	(12, 10)	413	102	1422	2324	10740
(13, 9)	1711	562	7588	9635	46614	(13, 10)	965	469	3302	4938	22732
(14, 9)	835	311	4139	5133	25219	(14, 10)	643	288	3235	3758	18286
(15, 9)	1441	600	4612	5327	25908	(15, 10)	1726	611	5587	7815	37234
(16, 9)	3489	557	6208	7757	38237	(16, 10)	695	193	2363	3238	15956
(17, 9)	665	307	4736	5834	32252	(17, 10)	1394	627	8894	1485	54315
(18, 9)	372	146	2391	2961	13237	(18, 10)	951	377	5826	7520	35872
(19, 9)	1635	344	7129	9509	45496	(19, 10)	601	195	3739	4580	20914
(20, 9)	1530	355	6640	9415	45561	(20, 10)	923	274	5030	6453	29674
(21, 9)	1846	619	3600	5501	24107	(21, 10)	1551	573	3019	8713	20395
(22, 9)	3500	1766	7086	10383	48082	(22, 10)	1465	604	3561	6008	28481
(23, 9)	1584	530	3189	5238	21655	(23, 10)	3797	2199	11289	14502	82882
(24, 9)	12489	3306	11564	33507	76684	(24, 10)	2822	851	5973	14502	82882
(25, 9)	4847	1655	10180	18146	82367	(25, 10)	1820	509	2940	9636	47132
(26, 9)	2162	665	4805	8423	40988	(26, 10)	3473	1093	11615	16942	84289
(27, 9)	3441	1272	10289	15443	74897	(27, 10)	3043	1737	8598	13874	70606
(28, 9)	1927	194	3320	6410	30349	(28, 10)	2827	746	5740	8552	41559
(29, 9)	6884	3075	23542	47330	215474	(29, 10)	2748	611	5849	9204	39892
(30, 9)	1293	138	1984	4181	15026	(30, 10)	0	0	0	0	0
(31, 9)	0	0	0	0	0	(31, 10)	0	0	0	0	0
(32, 9)	0	0	0	0	0	(32, 10)	0	0	0	0	0
(33, 9)	0	0	0	0	0	(33, 10)	0	0	0	0	0
(34, 9)	0	0	0	0	0	(34, 10)	0	0	0	0	0
(35, 9)	0	0	0	0	0	(35, 10)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60MM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,11)	538	261	2183	2676	11938	(1,12)	173	110	1246	1492	7006
(2,11)	44	13	170	244	1157	(2,12)	0	0	0	0	0
(3,11)	0	0	0	0	0	(3,12)	79	49	63	765	3868
(4,11)	1713	1155	12145	13229	61379	(4,12)	342	234	2979	2686	14995
(5,11)	410	333	3798	3601	17102	(5,12)	402	204	2603	3249	18172
(6,11)	494	376	4578	4614	21897	(6,12)	243	226	2500	1856	8301
(7,11)	361	112	1502	2431	12757	(7,12)	357	123	1631	1856	12921
(8,11)	1053	451	4727	7695	38037	(8,12)	486	179	2231	2554	17571
(9,11)	619	272	3895	6604	35004	(9,12)	327	1106	6896	14356	52217
(10,11)	7360	4662	48472	95444	454215	(10,12)	332	694	28138	7706	37850
(11,11)	1067	325	1138	1843	7806	(11,12)	434	4868	831	46209	233961
(12,11)	327	88	1138	1843	7806	(12,12)	190	806	837	13411	63620
(13,11)	1781	1029	8424	10469	50182	(13,12)	1033	262	3389	5641	25894
(14,11)	498	116	1408	2337	11296	(14,12)	1551	387	4263	5722	27533
(15,11)	4038	2529	23916	28332	136338	(15,12)	1259	280	5097	7376	35029
(16,11)	1428	603	7411	8372	41507	(16,12)	825	764	10018	12932	61352
(17,11)	1420	295	5378	5802	30640	(17,12)	839	297	4440	5961	25855
(18,11)	886	361	3896	5905	26064	(18,12)	2622	1435	5376	6883	32376
(19,11)	1340	802	7737	10341	47600	(19,12)	2778	1425	9082	13083	63666
(20,11)	2156	1550	7339	11004	55106	(20,12)	3112	1455	7177	11032	51058
(21,11)	1370	8689	36502	50434	249542	(21,12)	5990	3614	6312	13292	63913
(22,11)	5473	2521	8430	13312	64669	(22,12)	2872	1327	15111	22072	111638
(23,11)	3650	1608	9520	15004	73335	(23,12)	9827	7711	9631	14379	71923
(24,11)	3985	1959	5932	16451	77982	(24,12)	2608	1612	44356	14379	375169
(25,11)	3354	1257	9714	15577	77961	(25,12)	3613	833	8737	15237	77334
(26,11)	2281	655	4371	7370	35467	(26,12)	3043	1003	7278	12344	59791
(27,11)	2634	721	5519	3291	44262	(27,12)	4008	2751	7472	12131	60208
(28,11)	2154	843	5039	10330	45959	(28,12)	0	0	11233	21770	91862
(29,11)	0	0	0	0	0	(29,12)	0	0	0	0	0
(30,11)	0	0	0	0	0	(30,12)	0	0	0	0	0
(31,11)	0	0	0	0	0	(31,12)	0	0	0	0	0
(32,11)	0	0	0	0	0	(32,12)	0	0	0	0	0
(33,11)	0	0	0	0	0	(33,12)	0	0	0	0	0
(34,11)	0	0	0	0	0	(34,12)	0	0	0	0	0
(35,11)	0	0	0	0	0	(35,12)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60KM)

AREA SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID FT	PART	S02	NOX	HC	CO
(1,13)	62	21	219	340	1694	(1,14)	260	192	572	964	5386
(2,13)	295	193	937	1339	7230	(2,14)	2804	1175	8282	11870	60874
(3,13)	0	0	0	0	0	(3,14)	51	28	424	739	3987
(4,13)	124	54	766	1108	5756	(4,14)	185	90	1203	1931	10089
(5,13)	503	193	1907	2613	10503	(5,14)	571	384	3507	4376	23763
(6,13)	233	80	1239	1843	9096	(6,14)	504	363	3473	4387	22575
(7,13)	252	112	1342	1964	10056	(7,14)	212	174	1122	1644	7595
(8,13)	623	242	3131	4869	23974	(8,14)	626	245	2830	4454	19620
(9,13)	129	49	769	1060	5511	(9,14)	6968	4926	21762	39131	137705
(10,13)	1259	898	6781	10530	52680	(10,14)	2423	906	6892	10559	40789
(11,13)	998	562	5908	8807	44366	(11,14)	1736	1752	7614	10509	40645
(12,13)	1975	924	5747	9187	43330	(12,14)	7132	5489	13093	18062	85757
(13,13)	3510	1256	10745	14067	72396	(13,14)	3110	1615	10365	14325	71852
(14,13)	1737	161	2359	4558	22419	(14,14)	877	482	2036	3034	13488
(15,13)	2617	320	3323	6404	31912	(15,14)	1840	921	2404	3388	15383
(16,13)	2211	415	5054	7650	38816	(16,14)	1244	408	6807	3332	15367
(17,13)	849	467	5345	5955	30422	(17,14)	2217	1405	6007	8499	46055
(18,13)	7020	5874	46827	56459	300777	(18,14)	1857	1581	12302	15876	75973
(19,13)	1552	1163	10587	12291	60497	(19,14)	519	444	3853	5383	21448
(20,13)	3226	1982	10893	15665	74801	(20,14)	2001	2150	12664	15861	81537
(21,13)	2591	2302	12820	17430	86398	(21,14)	1221	1470	7003	9031	41671
(22,13)	4784	3421	17267	24859	128337	(22,14)	5337	4318	24607	34110	179237
(23,13)	4221	2335	11273	18872	31856	(23,14)	2775	1772	6552	9517	42154
(24,13)	5152	3344	15267	22768	97993	(24,14)	4743	2052	13405	22337	99202
(25,13)	8315	6316	35126	56213	288504	(25,14)	4754	1656	10788	22079	81996
(26,13)	3098	739	5972	10076	47717	(26,14)	7138	1752	13965	27571	109781
(27,13)	3746	1919	10577	19186	94922	(27,14)	8243	3108	16897	36589	135694
(28,13)	1803	305	2553	5792	22692	(28,14)	4055	849	8045	17454	60066
(29,13)	2106	303	2879	5556	25795	(29,14)	4572	197	6800	20920	62837
(30,13)	4764	3101	11372	25396	66170	(30,14)	0	0	0	0	0
(31,13)	0	0	0	0	0	(31,14)	0	0	0	0	0
(32,13)	0	0	0	0	0	(32,14)	0	0	0	0	0
(33,13)	0	0	0	0	0	(33,14)	0	0	0	0	0
(34,13)	0	0	0	0	0	(34,14)	0	0	0	0	0
(35,13)	0	0	0	0	0	(35,14)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 90KM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,15)	403	234	1737	2436	12873	(1,16)	3894	1602	15242	22308	119558
(2,15)	408	1603	13482	22472	100054	(2,16)	2162	1167	9320	19301	81405
(3,15)	95	52	852	1422	6384	(3,16)	70	39	607	348	6691
(4,15)	102	62	546	730	4069	(4,16)	175	71	988	1456	7051
(5,15)	350	176	1956	2625	14413	(5,16)	111	63	1101	1399	7094
(6,15)	112	46	642	794	3966	(6,16)	450	198	2616	3527	18006
(7,15)	297	114	1394	2131	9301	(7,16)	681	389	4030	5851	26542
(8,15)	1806	1259	8527	11319	47101	(8,16)	396	217	2157	3798	15468
(9,15)	1136	680	5704	7617	32675	(9,16)	3451	1059	9708	15662	62686
(10,15)	5329	703	5688	12030	47083	(10,16)	1869	239	1956	4452	18272
(11,15)	945	420	3307	5326	21990	(11,16)	5954	6103	32507	38300	152191
(12,15)	1193	1253	4201	5419	26952	(12,16)	6227	3590	37877	50581	259811
(13,15)	1042	587	2527	3444	17825	(13,16)	2802	1945	5688	7658	41665
(14,15)	2444	1357	4073	5212	26359	(14,16)	5211	4060	6829	9234	45761
(15,15)	1876	1135	3483	4467	21192	(15,16)	2528	1837	4834	5889	29893
(16,15)	605	318	857	1151	5857	(16,16)	5145	3688	15670	19431	92226
(17,15)	2621	1916	5808	7436	38905	(17,16)	4654	4473	10442	14498	70315
(18,15)	2619	3043	8349	10404	52912	(18,16)	2082	2779	6598	10100	47654
(19,15)	2103	2320	5980	8981	40901	(19,16)	2253	2866	8238	11081	57473
(20,15)	1119	1056	7116	9360	43874	(20,16)	3260	3669	8416	12084	57823
(21,15)	5008	5946	10192	41042	232000	(21,16)	3075	3161	8512	11780	63647
(22,15)	1402	1891	8187	11134	50952	(22,16)	1124	830	3348	4902	22205
(23,15)	1606	2515	9115	12249	56317	(23,16)	1347	2987	5383	7300	31213
(24,15)	1689	1279	8937	11789	57854	(24,16)	4925	4130	26960	37375	185378
(25,15)	2009	1848	8333	9150	44137	(25,16)	1929	1463	10412	13126	65358
(26,15)	10512	10229	34318	62036	232241	(26,16)	5672	6059	22252	24458	113203
(27,15)	5247	1258	9470	18186	71003	(27,16)	11929	8571	41894	62265	301497
(28,15)	3977	966	6591	12366	43922	(28,16)	7519	2957	13525	22445	95453
(29,15)	7395	2116	14965	28823	109091	(29,16)	4915	1197	7652	14666	60714
(30,15)	2823	604	4727	10526	37168	(30,16)	18805	1575	11973	33315	130879
(31,15)	0	0	0	0	0	(31,16)	3504	2067	10687	11309	46874
(32,15)	0	0	0	0	0	(32,16)	0	0	0	0	0
(33,15)	0	0	0	0	0	(33,16)	0	0	0	0	0
(34,15)	0	0	0	0	0	(34,16)	0	0	0	0	0
(35,15)	0	0	0	0	0	(35,16)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 30NM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	HC	HC
(1.17)	14051	7375	47911	70063	363432	(1.18)	2567	1013	7630	8332	30291	
(2.17)	2367	1340	11843	10160	162633	(2.19)	60	52	556	639	3374	
(3.17)	67	36	531	749	4305	(3.19)	330	270	2518	3619	21502	
(4.17)	231	135	1841	2275	12282	(4.19)	611	520	5482	6745	35406	
(5.17)	100	127	1046	1119	6072	(5.19)	22	16	191	205	1101	
(6.17)	443	298	3099	3674	19314	(6.19)	270	226	2631	3098	17623	
(7.17)	484	503	2803	3553	16627	(7.19)	797	616	7418	9131	50140	
(8.17)	950	730	5952	7612	37804	(8.19)	707	634	6775	7152	37238	
(9.17)	477	353	2784	3755	19594	(9.19)	1742	1228	13043	18648	98148	
(10.17)	1250	748	4877	8196	36444	(10.19)	673	526	5309	6553	34876	
(11.17)	3092	2934	17092	20846	51805	(11.19)	862	729	4139	5097	29857	
(12.17)	6615	7789	26668	30258	126373	(12.19)	1877	1530	4696	5543	32517	
(13.17)	4164	3490	6281	7604	43247	(13.19)	3934	3697	4386	4930	28308	
(14.17)	5026	4215	6813	8435	46016	(14.19)	3177	2704	5148	6065	33910	
(15.17)	5100	4426	5196	5930	21045	(15.19)	5465	4866	9045	12485	66171	
(16.17)	5812	31422	72415	99923	465844	(16.19)	2028	1973	7336	12078	63810	
(17.17)	8715	9939	28189	40261	177573	(17.19)	2382	2036	9153	13308	80867	
(18.17)	2412	2804	8692	13534	67999	(18.19)	1705	1292	6653	10753	54957	
(19.17)	7853	8398	20287	28759	146231	(19.19)	3944	5736	14483	17853	91626	
(20.17)	3804	4759	9432	16865	57509	(20.19)	4553	5716	11633	14819	76300	
(21.17)	3073	2741	10351	14456	22823	(21.19)	23244	26126	45564	60973	295202	
(22.17)	2314	1499	7179	9730	51357	(22.19)	5060	3835	19445	26110	142409	
(23.17)	2508	2127	10357	14176	71074	(23.19)	2313	1832	9105	12373	66248	
(24.17)	2119	1976	6421	8666	39914	(24.19)	2238	1439	7114	7778	36994	
(25.17)	3702	3076	19177	25875	131813	(25.19)	2772	3323	8516	11621	55427	
(26.17)	3008	3871	11977	16795	78667	(26.19)	1576	2076	6889	9006	42008	
(27.17)	3640	2901	12214	14840	71976	(27.19)	2843	2536	11412	13728	64525	
(28.17)	10828	7809	39941	55335	276648	(28.19)	7401	6886	27863	37736	192334	
(29.17)	3147	1854	9449	12732	12549	(29.19)	6587	6536	28916	44416	213052	
(30.17)	5910	2253	12237	23625	195176	(30.19)	6187	3302	29998	28916	140601	
(31.17)	7264	1681	11911	19159	91823	(31.19)	4431	2613	13714	19879	93106	
(32.17)	1052	626	3664	4532	18174	(32.19)	300	375	2229	1538	5208	
(33.17)	0	0	0	0	0	(33.19)	0	0	0	0	0	
(34.17)	0	0	0	0	0	(34.19)	0	0	0	0	0	
(35.17)	0	0	0	0	0	(35.19)	0	0	0	0	0	

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80MM)

AREA SOURCE EMISSIONS

GRID PY	PART	SO2	NOX	HC	CO	GRID PY	PART	SO2	NOX	HC	CO
(1,19)	391	438	3008	2544	10032	(1,20)	393	130	1372	1498	6598
(2,19)	341	275	3107	3963	22148	(2,20)	491	201	1853	1628	6867
(3,19)	53	104	1006	851	3931	(3,20)	272	281	2408	2833	14983
(4,19)	75	79	826	826	3809	(4,20)	78	52	572	802	4895
(5,19)	63	82	657	497	2324	(5,20)	96	73	821	968	5084
(6,19)	167	151	1406	1653	8781	(6,20)	175	133	1375	1772	9628
(7,19)	298	375	2958	2666	12750	(7,20)	507	447	4263	5498	29816
(8,19)	481	444	4499	5246	28019	(8,20)	500	516	4270	5136	29699
(9,19)	890	864	7662	3468	50927	(9,20)	1204	744	5606	6316	46947
(10,19)	5370	3767	33602	51065	260552	(10,20)	983	557	4356	6148	34973
(11,19)	1370	687	6460	3768	54904	(11,20)	6374	2723	21236	35429	175050
(12,19)	716	430	3243	4790	26811	(12,20)	1914	1005	8225	13225	73129
(13,19)	1832	1168	7230	10359	55202	(13,20)	1801	1102	8225	12146	64516
(14,19)	1476	1181	5565	7766	40549	(14,20)	2157	1203	7516	13457	71274
(15,19)	1297	1245	4927	7750	42228	(15,20)	7790	830	26725	92995	175943
(16,19)	3642	3269	13901	21646	104583	(16,20)	4752	3609	12112	22180	108352
(17,19)	3741	3036	11952	17341	89454	(17,20)	3189	3241	10765	16087	84733
(18,19)	3741	2903	13047	19588	93591	(18,20)	5597	6511	14942	20419	106350
(19,19)	4798	6785	13666	18559	95742	(19,20)	33850	38267	66836	98553	480870
(20,19)	8242	9272	23106	29074	118188	(20,20)	7018	8089	16831	22027	113932
(21,19)	3445	4250	10100	13011	67852	(21,20)	50091	23033	54233	91775	414657
(22,19)	9431	21359	64992	103945	458329	(22,20)	9664	7373	14277	13155	95310
(23,19)	2493	2040	9664	9651	50462	(23,20)	6065	5532	13519	14208	65113
(24,19)	3290	2721	13621	16002	78696	(24,20)	2447	2139	16050	19475	93754
(25,19)	1832	1312	6986	8908	40044	(25,20)	978	1463	4444	4813	20924
(26,19)	2515	3532	11276	14181	64627	(26,20)	2009	2634	10274	13219	64921
(27,19)	2656	5590	13851	18040	96632	(27,20)	1530	2756	6910	7945	33371
(28,19)	2514	3135	12887	16577	78076	(28,20)	4527	11568	21817	28282	142588
(29,19)	2231	1854	8293	10721	47573	(29,20)	1840	2351	8131	10850	50722
(30,19)	1761	1453	6205	8316	36797	(30,20)	9704	18562	46130	60924	324810
(31,19)	3627	1115	5640	9782	45115	(31,20)	428	337	2433	1664	5587
(32,19)	1525	800	6563	6974	22241	(32,20)	0	0	0	0	0
(33,19)	0	0	0	0	0	(33,20)	0	0	0	0	0
(34,19)	0	0	0	0	0	(34,20)	0	0	0	0	0
(35,19)	0	0	0	0	0	(35,20)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80KM)

AREA SOURCE EMISSIONS

GRID PY	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,21)	757	174	1756	2209	10008	(1,22)	3812	382	3682	6909	35263
(2,21)	99	64	511	450	4714	(2,22)	97	50	583	807	4238
(3,21)	118	34	341	552	2793	(3,22)	1304	336	3411	7035	29876
(4,21)	53	17	298	404	2745	(4,22)	86	34	513	758	4113
(5,21)	79	31	423	615	3436	(5,22)	127	48	706	1060	6645
(6,21)	220	143	1290	2150	13231	(6,22)	198	115	1110	2152	12396
(7,21)	172	111	1055	1635	9676	(7,22)	408	294	2497	4004	24477
(8,21)	575	432	3641	5230	30325	(8,22)	517	420	3230	4911	31239
(9,21)	891	528	5258	7750	44170	(9,22)	1655	898	9008	14523	60293
(10,21)	2560	1219	8859	14711	74213	(10,22)	1010	545	4463	3281	40030
(11,21)	1724	909	7064	10529	57052	(11,22)	670	388	2943	4521	25624
(12,21)	2419	1469	9132	15016	83416	(12,22)	1688	884	7005	10501	57124
(13,21)	3610	1890	11457	18019	93776	(13,22)	1789	1715	7562	10909	60405
(14,21)	5030	2428	17164	28751	144540	(14,22)	2467	1466	8541	13733	71395
(15,21)	7801	5790	23907	36836	175842	(15,22)	1526	1511	5034	8627	46770
(16,21)	3407	3407	11896	18545	100960	(16,22)	11288	10340	25328	35077	172723
(17,21)	7237	7104	25673	35522	169218	(17,22)	15790	14120	57277	85596	338090
(18,21)	20160	24271	40897	52570	243725	(18,22)	79903	102558	234490	426174	1209026
(19,21)	3810	4336	13217	17491	89967	(19,22)	21501	23187	47636	62491	310195
(20,21)	8712	10817	22671	28960	150296	(20,22)	13277	15303	29873	41240	205116
(21,21)	8473	7329	16737	23561	125214	(21,22)	13782	10502	17207	25060	127762
(22,21)	16410	10596	24794	36537	185198	(22,22)	11831	9946	19998	28621	152082
(23,21)	42030	26106	52482	94329	433609	(23,22)	16090	15836	25310	34101	173525
(24,21)	7509	6386	11657	17001	83081	(24,22)	7337	8753	11403	16750	83772
(25,21)	6675	5595	16749	16382	77653	(25,22)	10865	12851	29159	36293	182551
(26,21)	1679	2642	9490	19460	50041	(26,22)	3351	5635	18442	23267	114139
(27,21)	948	1302	4529	5560	25662	(27,22)	1526	1918	8405	10747	51907
(28,21)	1778	2731	8902	11353	54011	(28,22)	2462	3410	12768	16388	74534
(29,21)	2946	4106	14916	21358	101358	(29,22)	20678	40766	107221	158217	803058
(30,21)	1263	1886	6284	9279	38816	(30,22)	1883	1197	6403	11205	44524
(31,21)	620	719	3566	5567	23910	(31,22)	1809	1076	7996	12563	55543
(32,21)	0	0	0	0	0	(32,22)	0	0	0	0	0
(33,21)	0	0	0	0	0	(33,22)	0	0	0	0	0
(34,21)	0	0	0	0	0	(34,22)	0	0	0	0	0
(35,21)	0	0	0	0	0	(35,22)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CAN ADDN GRID
(GRID SPACING = 80MM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,23)	145	85	843	671	2640	(1,24)	3072	104	1357	4795	22818
(2,23)	355	106	1570	2710	15015	(2,24)	47	20	269	423	2738
(3,23)	178	63	970	1035	10181	(3,24)	85	47	404	687	4473
(4,23)	102	55	449	634	4320	(4,24)	172	73	524	910	5178
(5,23)	78	48	491	951	5218	(5,24)	193	157	850	1475	8161
(6,23)	259	205	1446	2459	14492	(6,24)	252	212	1119	2032	12601
(7,23)	204	145	1229	2051	12403	(7,24)	491	359	2654	4497	27640
(8,23)	515	376	2947	4962	30024	(8,24)	554	498	2982	4925	29443
(9,23)	103	94	653	963	6242	(9,24)	635	646	3954	5763	36127
(10,23)	0	0	0	0	0	(10,24)	992	0	0	0	0
(11,23)	304	458	2558	3540	20881	(11,24)	1016	1278	6256	8479	46051
(12,23)	311	348	1766	2603	14231	(12,24)	2876	1815	5442	7886	41370
(13,23)	950	1342	4745	6618	37816	(13,24)	1066	2579	8005	11794	62172
(14,23)	3235	2738	7664	12148	63950	(14,24)	4657	3624	2869	4541	22696
(15,23)	1998	1693	4975	7243	40353	(15,24)	8886	6759	9699	14195	71572
(16,23)	10829	8875	23046	35380	182262	(16,24)	7501	5650	13583	20070	103163
(17,23)	34343	23479	72504	141572	588921	(17,24)	275	317	12637	18044	95937
(18,23)	0	0	0	0	0	(18,24)	22147	20730	1448	1829	8726
(19,23)	9322	8770	26823	31341	152602	(19,24)	11349	10891	56762	67377	326018
(20,23)	12983	12395	36758	41071	192735	(20,24)	46200	49340	37806	44252	225093
(21,23)	30015	22773	57356	75040	377434	(21,24)	16293	13742	208652	310816	1580709
(22,23)	8852	9333	11239	17916	50747	(22,24)	7591	8223	50779	68614	390213
(23,23)	113960	98957	99951	191164	759072	(23,24)	6498	6994	9357	15356	72582
(24,23)	95262	77680	104395	140549	684340	(24,24)	3075	4919	18225	14617	69070
(25,23)	18422	37719	92747	113234	65138	(25,24)	2000	4171	17792	22661	109591
(26,23)	7006	12667	36120	46229	249077	(26,24)	2727	5019	10065	11745	37833
(27,23)	1736	2407	9006	10259	52193	(27,24)	4274	7656	11476	14870	84092
(28,23)	6003	7194	27142	36823	186576	(28,24)	3218	15484	19731	26508	145422
(29,23)	20441	33978	115780	16852	811029	(29,24)	43401	5299	84932	57439	311908
(30,23)	2133	11012	1862	1862	83811	(30,24)	2487	16913	171883	23354	1262169
(31,23)	3102	1403	5915	10321	49332	(31,24)	0	0	16913	16145	85662
(32,23)	0	0	0	0	0	(32,24)	0	0	0	0	0
(33,23)	0	0	0	0	0	(33,24)	0	0	0	0	0
(34,23)	0	0	0	0	0	(34,24)	0	0	0	0	0
(35,23)	0	0	0	0	0	(35,24)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80MM)

AQTA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	ICO
(1,25)	150	170	1160	1101	5265	(1,26)	252	230	1690	1703	7046
(2,25)	165	148	1135	1344	7601	(2,26)	188	117	927	1190	6320
(3,25)	180	149	942	1115	7136	(3,26)	508	937	2062	2342	13050
(4,25)	133	144	581	635	4614	(4,26)	855	1255	2891	3602	20982
(5,25)	189	193	1237	1778	10294	(5,26)	749	609	3471	4401	24098
(6,25)	268	305	1429	1424	12585	(6,26)	420	454	2139	2637	15326
(7,25)	355	315	1459	1597	10327	(7,26)	547	537	2797	3679	22692
(8,25)	653	626	3586	4917	30947	(8,26)	1408	1400	5791	7139	40005
(9,25)	156	138	823	1314	7075	(9,26)	0	0	0	0	0
(10,25)	1412	1806	7069	10660	55831	(10,26)	190	161	848	1311	6514
(11,25)	203	181	1161	1638	8467	(11,26)	0	0	0	0	0
(12,25)	1300	1182	3908	5659	29124	(12,26)	1070	1066	2785	4723	22955
(13,25)	3107	2653	7680	11351	60296	(13,26)	408	359	1419	2317	10273
(14,25)	1022	920	3092	4426	24065	(14,26)	425	337	926	1351	6723
(15,25)	3826	3176	7777	10835	58715	(15,26)	2007	1700	4653	7339	35734
(16,25)	9184	7585	17438	26192	132956	(16,26)	1903	1627	4390	6195	30543
(17,25)	3635	2784	5627	8458	45275	(17,26)	524	460	1389	3141	14395
(18,25)	1264	1434	4660	4561	23264	(18,26)	1164	730	5319	7182	31560
(19,25)	1788	2132	7438	8374	43023	(19,26)	776	730	4489	4489	20309
(20,25)	2518	2682	11721	13397	67270	(20,26)	992	1120	4995	6362	30018
(21,25)	3384	4585	16836	13047	122245	(21,26)	698	770	3544	4426	21833
(22,25)	196	797	502	54	124	(22,26)	0	0	0	0	0
(23,25)	10156	17676	17676	14577	77944	(23,26)	2142	7698	16344	13051	93943
(24,25)	4580	10849	22656	31345	163316	(24,26)	22101	26901	58959	89424	507246
(25,25)	1533	2240	9056	11659	58982	(25,26)	1232	1560	7927	11918	69307
(26,25)	551	971	2350	2715	15093	(26,26)	2554	5081	14724	20851	115885
(27,25)	9177	16659	38201	48975	272563	(27,26)	1690	2718	9360	12387	63458
(28,25)	10346	17428	43502	57418	325744	(28,26)	3240	5425	14280	20420	110579
(29,25)	29001	42021	125252	159115	865441	(29,26)	64013	119024	280898	377582	1840270
(30,25)	7392	8392	38685	51518	241347	(30,26)	59461	96220	226487	386638	1483302
(31,25)	0	0	0	0	0	(31,26)	0	0	0	0	0
(32,25)	0	0	0	0	0	(32,26)	0	0	0	0	0
(33,25)	0	0	0	0	0	(33,26)	0	0	0	0	0
(34,25)	0	0	0	0	0	(34,26)	0	0	0	0	0
(35,25)	0	0	0	0	0	(35,26)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 0.0001)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,27)	475	448	2627	2953	14246	(1,28)	222	189	1138	1536	6379
(1,27)	456	358	2345	3047	17493	(1,28)	137	146	550	705	4406
(1,27)	0	0	0	0	0	(1,28)	172	175	613	788	4698
(1,27)	456	389	2175	2921	17294	(1,28)	1136	925	4977	6091	33942
(1,27)	363	369	1953	1937	12181	(1,28)	310	322	1567	1788	10361
(1,27)	462	504	2689	3231	19847	(1,28)	437	472	2765	3395	20443
(1,27)	1465	1400	5497	6452	36000	(1,28)	573	634	2718	3173	19259
(1,27)	175	178	1053	1302	7830	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	756	724	1642	3110	13516	(1,28)	3400	6306	12801	19898	94433
(1,27)	1032	1154	3587	5079	25364	(1,28)	0	0	0	0	0
(1,27)	489	530	1888	2532	11399	(1,28)	572	677	2563	4380	18052
(1,27)	1320	1825	6353	7732	38083	(1,28)	0	0	0	0	0
(1,27)	951	1178	3783	4233	19954	(1,28)	254	258	730	1492	5974
(1,27)	0	0	0	0	0	(1,28)	654	1057	3654	6002	25732
(1,27)	1553	1772	6710	9223	42041	(1,28)	0	0	0	0	0
(1,27)	814	845	2441	3359	16150	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	9136	25666	50437	68342	373662	(1,28)	0	0	0	0	0
(1,27)	936	20000	6028	8948	51174	(1,28)	0	0	0	0	0
(1,27)	6875	14289	35364	59715	289112	(1,28)	956	1875	5018	8522	41101
(1,27)	5859	11858	31623	43632	255335	(1,28)	4364	7823	21843	34609	181552
(1,27)	2285	3917	12448	13741	163536	(1,28)	5866	12746	38866	42672	215455
(1,27)	2463	3372	14207	22027	117891	(1,28)	11952	24930	55359	87267	395680
(1,27)	2523	3651	14768	23415	119402	(1,28)	8860	13164	45913	70384	331190
(1,27)	21790	29667	111518	138920	928233	(1,28)	12144	21602	51781	79937	378257
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 00MM)

AFFA SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1.29)	0	0	0	0	0	(1.30)	7495	7176	18654	30612	192805
(2.29)	581	556	1447	2374	14957	(2.30)	227	217	565	927	5842
(3.29)	563	539	1401	2310	14490	(3.30)	118	113	293	482	3638
(4.29)	160	130	186	353	2655	(4.30)	206	182	372	643	4341
(5.29)	178	145	207	392	2950	(5.30)	1051	857	1223	2317	17410
(6.29)	160	130	156	353	2655	(6.30)	427	398	497	942	7082
(7.29)	338	276	393	746	5606	(7.30)	15220	12406	17706	33543	252004
(8.29)	106	87	124	235	1770	(8.30)	71	58	82	157	1186
(9.29)	163	166	863	1256	6866	(9.30)	0	0	0	0	0
(10.29)	0	0	0	0	0	(10.30)	0	0	0	0	0
(11.29)	0	0	0	0	0	(11.30)	0	0	0	0	0
(12.29)	0	0	0	0	0	(12.30)	0	0	0	0	0
(13.29)	0	0	0	0	0	(13.30)	0	0	0	0	0
(14.29)	0	0	0	0	0	(14.30)	0	0	0	0	0
(15.29)	0	0	0	0	0	(15.30)	0	0	0	0	0
(16.29)	0	0	0	0	0	(16.30)	0	0	0	0	0
(17.29)	0	0	0	0	0	(17.30)	0	0	0	0	0
(18.29)	0	0	0	0	0	(18.30)	0	0	0	0	0
(19.29)	0	0	0	0	0	(19.30)	0	0	0	0	0
(20.29)	0	0	0	0	0	(20.30)	0	0	0	0	0
(21.29)	0	0	0	0	0	(21.30)	0	0	0	0	0
(22.29)	0	0	0	0	0	(22.30)	0	0	0	0	0
(23.29)	0	0	0	0	0	(23.30)	0	0	0	0	0
(24.29)	0	0	0	0	0	(24.30)	0	0	0	0	0
(25.29)	0	0	0	0	0	(25.30)	0	0	0	0	0
(26.29)	0	0	0	0	0	(26.30)	0	0	0	0	0
(27.29)	1167	2110	6128	10663	52537	(27.30)	1225	3174	5741	8946	43663
(28.29)	53	69	309	1492	4907	(28.30)	785	1136	4123	7818	37522
(29.29)	2190	4124	11696	19107	31841	(29.30)	1493	1423	6952	5284	41172
(30.29)	1570	2355	7346	3821	44661	(30.30)	1047	1343	4952	6861	31121
(31.29)	6902	16207	29732	45617	132005	(31.30)	8457	15821	17356	50764	223250
(32.29)	36458	79226	177087	291958	1273845	(32.30)	4827	10942	21771	35496	166780
(33.29)	0	0	0	0	0	(33.30)	0	0	0	0	0
(34.29)	0	0	0	0	0	(34.30)	0	0	0	0	0
(35.29)	0	0	0	0	0	(35.30)	0	0	0	0	0

SECTION D-3

GRIDDED POINT AND AREA SOURCE EMISSIONS (TONS/YEAR) ON THE 80-KM GRID NETWORK

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60MM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	EC	GRID PT	PART	SO2	NOX	HC	CO
(1, 1)	0	0	0	0	0	(1, 2)	0	0	0	0	0
(2, 1)	0	0	0	0	0	(2, 2)	0	0	0	0	0
(3, 1)	0	0	0	0	0	(3, 2)	0	0	0	0	0
(4, 1)	0	0	0	0	0	(4, 2)	0	0	0	0	0
(5, 1)	0	0	0	0	0	(5, 2)	0	0	0	0	0
(6, 1)	0	0	0	0	0	(6, 2)	1	0	0	0	0
(7, 1)	979	70	819	1368	4250	(7, 2)	1517	46	506	469	2270
(8, 1)	98	69	1663	2801	3706	(8, 2)	4093	1168	2565	2583	12956
(9, 1)	116	2023	1340	1251	5781	(9, 2)	2276	11809	16014	9044	28567
(10, 1)	3616	1895	5336	10675	23380	(10, 2)	384	5270	3325	3313	13712
(11, 1)	6493	4640	85685	14774	155804	(11, 2)	1190	483	16336	13737	45495
(12, 1)	1	0	81	33	0	(12, 2)	26027	2988	190895	72861	23592
(13, 1)	0	0	0	0	0	(13, 2)	4846	2324	29591	162795	60465
(14, 1)	0	0	0	0	0	(14, 2)	0	0	0	0	0
(15, 1)	0	0	0	0	0	(15, 2)	0	0	0	0	0
(16, 1)	0	0	0	0	0	(16, 2)	0	0	0	0	0
(17, 1)	0	0	0	0	0	(17, 2)	0	0	0	0	0
(18, 1)	0	0	0	0	0	(18, 2)	0	0	0	0	0
(19, 1)	2	0	17	0	1	(19, 2)	0	0	0	0	0
(20, 1)	0	0	0	0	0	(20, 2)	0	0	0	0	0
(21, 1)	0	0	0	0	0	(21, 2)	0	0	0	0	0
(22, 1)	0	0	0	0	0	(22, 2)	0	0	0	0	0
(23, 1)	0	0	0	0	0	(23, 2)	0	0	0	0	0
(24, 1)	0	0	0	0	0	(24, 2)	0	0	0	0	0
(25, 1)	0	0	0	0	0	(25, 2)	0	0	0	0	0
(26, 1)	0	0	0	0	0	(26, 2)	0	0	0	0	0
(27, 1)	0	0	0	0	0	(27, 2)	0	0	0	0	0
(28, 1)	0	0	0	0	0	(28, 2)	0	0	0	0	0
(29, 1)	0	0	0	0	0	(29, 2)	0	0	0	0	0
(30, 1)	0	0	0	0	0	(30, 2)	0	0	0	0	0
(31, 1)	0	0	0	0	0	(31, 2)	0	0	0	0	0
(32, 1)	0	0	0	0	0	(32, 2)	0	0	0	0	0
(33, 1)	0	0	0	0	0	(33, 2)	564	709	4554	5037	22720
(34, 1)	0	0	0	0	0	(34, 2)	0	0	0	0	0
(35, 1)	0	0	0	0	0	(35, 2)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 10MM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	EC	GRID PT	PART	SO2	NOX	HC	CO
(1, 3)	0	0	0	0	0	(1, 4)	15	0	4	0	0
(2, 3)	98	130	1128	560	2482	(2, 4)	28	78	292	289	1445
(3, 3)	97	95	955	1019	4446	(3, 4)	256	1754	123	16	1
(4, 3)	0	0	0	0	0	(4, 4)	329	352	5233	8752	3489
(5, 3)	53	79	723	300	1531	(5, 4)	66	275	20056	2848	4055
(6, 3)	4724	994	3851	12347	19810	(6, 4)	94	63	1258	2251	543
(7, 3)	24	12	212	333	2228	(7, 4)	54	23	563	636	3610
(8, 3)	244	160	2044	2176	10488	(8, 4)	179	22	433	616	3300
(9, 3)	19476	9267	4924	61340	212415	(9, 4)	3757	121	1823	1741	8441
(10, 3)	5327	390	5010	6483	29607	(10, 4)	19321	2317	22166	34069	104947
(11, 3)	409	96	1342	1508	7734	(11, 4)	25761	48173	17196	13159	29185
(12, 3)	5643	472	13780	12923	30348	(12, 4)	492	313	9389	5016	20482
(13, 3)	6111	11161	51793	68662	343620	(13, 4)	64505	112542	188351	320440	633192
(14, 3)	8593	26543	53081	89121	267031	(14, 4)	4133	22163	41453	17335	42210
(15, 3)	0	0	0	0	0	(15, 4)	17017	116836	129256	262448	322815
(16, 3)	0	0	0	0	0	(16, 4)	196	200	2723	2060	6147
(17, 3)	0	0	0	0	0	(17, 4)	8	4	374	21	114
(18, 3)	0	0	0	0	0	(18, 4)	0	0	0	0	0
(19, 3)	0	0	0	0	0	(19, 4)	895	402	5810	6530	29243
(20, 3)	0	0	0	0	0	(20, 4)	0	0	0	0	0
(21, 3)	0	0	0	0	0	(21, 4)	41	1	515	0	38
(22, 3)	0	0	0	0	0	(22, 4)	0	0	0	0	0
(23, 3)	0	0	0	0	0	(23, 4)	0	0	0	0	0
(24, 3)	0	0	0	0	0	(24, 4)	0	0	0	0	0
(25, 3)	0	0	0	0	0	(25, 4)	0	0	0	0	0
(26, 3)	0	0	0	0	0	(26, 4)	0	0	0	0	0
(27, 3)	0	0	0	0	0	(27, 4)	0	0	0	0	0
(28, 3)	0	0	0	0	0	(28, 4)	0	0	0	0	0
(29, 3)	0	0	0	0	0	(29, 4)	0	0	0	0	0
(30, 3)	0	0	0	0	0	(30, 4)	0	0	0	0	0
(31, 3)	0	0	0	0	0	(31, 4)	4432	16185	70104	14054	66313
(32, 3)	1591	191	2370	5005	28605	(32, 4)	1211	811	1151	2172	10704
(33, 3)	0	0	0	0	0	(33, 4)	58	0	0	0	0
(34, 3)	502	3487	6845	111	243	(34, 4)	22150	71797	115523	144482	671955
(35, 3)	0	0	0	0	0	(35, 4)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60MM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CC	GRID PT	PART	S02	NOX	HC	CC
(1, 5)	3137	92	1498	1674	7430	(1, 6)	14013	0	0	0	0
(2, 5)	98	82	1025	1624	8400	(2, 6)	493	129	1235	346	0
(3, 5)	919	42945	12706	11218	15090	(3, 6)	1560	57089	13627	13195	8784
(4, 5)	411	25473	25214	9287	2526	(4, 6)	7390	42376	42625	23601	34624
(5, 5)	108	130	6026	1612	2366	(5, 6)	2503	20039	17537	36857	124587
(6, 5)	2	0	437	59	0	(6, 6)	860	1834	20249	2717	11198
(7, 5)	1386	939	9013	7335	32050	(7, 6)	2505	348	5184	3400	16113
(8, 5)	545	61	1727	932	5210	(8, 6)	1164	263	3795	5837	16353
(9, 5)	464	234	3690	4136	20668	(9, 6)	3461	159	2497	3041	16144
(10, 5)	4900	1056	12648	30498	65275	(10, 6)	4015	1405	21681	21985	65353
(11, 5)	380	340	3535	4125	16308	(11, 6)	15312	2207	13993	3562	15304
(12, 5)	781	457	6153	6152	20020	(12, 6)	2297	95915	30569	7711	33764
(13, 5)	5451	375	8205	5630	27818	(13, 6)	3219	531	6276	14180	32101
(14, 5)	7112	533	5531	5190	21945	(14, 6)	1764	1534	8091	6397	10676
(15, 5)	12585	2207	25733	36084	254090	(15, 6)	9596	197	2534	6967	24202
(16, 5)	16603	128695	119215	81114	83790	(16, 6)	2651	1312	11200	15634	58110
(17, 5)	3905	1971	21956	24086	108704	(17, 6)	47124	885	3167	34887	320336
(18, 5)	30963	98435	31535	52735	334679	(18, 6)	12560	891	72161	16282	282039
(19, 5)	175463	61253	111608	117398	110480	(19, 6)	525	891	15023	28880	163010
(20, 5)	20070	56282	114596	99047	416394	(20, 6)	54	54	1043	2265	11057
(21, 5)	1167	3546	1890	314	187	(21, 6)	3584	74651	15366	1659	769
(22, 5)	0	0	0	0	0	(22, 6)	0	0	0	5	0
(23, 5)	0	0	0	0	0	(23, 6)	0	0	0	0	0
(24, 5)	0	0	0	0	0	(24, 6)	0	0	0	0	0
(25, 5)	0	0	0	0	0	(25, 6)	0	0	0	0	0
(26, 5)	0	0	0	0	0	(26, 6)	0	0	0	0	0
(27, 5)	0	0	0	0	0	(27, 6)	0	0	0	0	0
(28, 5)	0	0	0	0	0	(28, 6)	4807	19109	0	37397	176042
(29, 5)	61	16022	25952	18970	07817	(29, 6)	51639	25791	24503	49055	235721
(30, 5)	4616	320	2447	6287	24132	(30, 6)	76735	7116	70743	25164	111358
(31, 5)	5388	1828	3607	3658	31535	(31, 6)	4736	6732	13765	25164	54679
(32, 5)	6460	29840	30697	23121	139223	(32, 6)	3526	5444	10305	12043	43737
(33, 5)	444	150	96	119	1638	(33, 6)	0	0	0	9758	0
(34, 5)	0	0	0	0	0	(34, 6)	0	0	0	0	0
(35, 5)	0	0	0	0	0	(35, 6)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60 KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CC	GRID PT	PART	SO2	NOX	HC	CO
(1, 7)	1	0	0	84	1935	(1, 8)	3421	0	0	0	0
(2, 7)	5652	2390	4030	7761	10497	(2, 8)	26	340	331	4618	17547
(3, 7)	978	7947	9109	16077	10497	(3, 8)	1738	1801	331	512	10
(4, 7)	1082	2290	11864	2841	8606	(4, 8)	15856	3603	13643	5879	28555
(5, 7)	1150	733	4276	2845	11038	(5, 8)	108	3211	24168	12252	112252
(6, 7)	1590	539	13168	5075	13557	(6, 8)	621	55	988	1265	6695
(7, 7)	9796	1297	13537	13941	39565	(7, 8)	229	240	5989	2542	13052
(8, 7)	641	243	5270	5641	25176	(8, 8)	33617	145	2247	2842	12372
(9, 7)	8247	508	7744	5716	21315	(9, 8)	15839	137	9821	3828	11399
(10, 7)	16771	1379	14266	20600	39747	(10, 8)	15839	12268	58368	95881	275817
(11, 7)	33879	36163	14248	13479	59083	(11, 8)	19336	17683	107789	115227	417276
(12, 7)	3816	504	10155	5416	11586	(12, 8)	1607	40763	8275	8967	38098
(13, 7)	9946	3146	74383	37639	76004	(13, 8)	5054	12497	36816	28546	96016
(14, 7)	2656	332	6074	9606	20638	(14, 8)	11822	3522	29190	61032	137729
(15, 7)	4693	2889	7326	9139	52090	(15, 8)	2970	686	13360	14312	67217
(16, 7)	9187	67137	41235	3474	19326	(16, 8)	4886	3400	17077	48730	66050
(17, 7)	8252	6888	8802	8713	10185	(17, 8)	926	446	6215	7658	41139
(18, 7)	2062	149	2534	5120	21119	(18, 8)	50121	16301	33088	26459	118452
(19, 7)	1142	2141	11034	12047	82343	(19, 8)	1451	1080	3372	5348	21815
(20, 7)	18031	15833	14275	19601	52562	(20, 8)	3407	14011	9322	9898	38143
(21, 7)	8220	13814	10242	18057	61049	(21, 8)	3817	7253	3686	8804	32177
(22, 7)	16003	98647	78528	36102	180875	(22, 8)	4033	12145	1872	473	665
(23, 7)	23760	132416	52997	39016	119477	(23, 8)	8343	34405	10353	20317	84226
(24, 7)	31	1	1	1	7	(24, 8)	1984	419	3215	5885	27049
(25, 7)	14475	60880	17190	10476	95546	(25, 8)	8105	2877	4637	6509	22486
(26, 7)	4780	10998	3331	2038	19653	(26, 8)	6852	4464	11368	14273	62239
(27, 7)	0	0	0	0	0	(27, 8)	10811	9805	6233	4027	17915
(28, 7)	231	33	466	372	482	(28, 8)	1491	207	2036	3371	14808
(29, 7)	10882	50906	20708	5146	20655	(29, 8)	4300	10119	10735	14290	71596
(30, 7)	3463	473	5236	3197	43298	(30, 8)	19493	18424	9761	15138	76728
(31, 7)	12810	54379	42587	30435	152152	(31, 8)	5507	26236	31771	21900	105415
(32, 7)	2577	11688	23327	17633	87990	(32, 8)	0	0	0	0	0
(33, 7)	0	0	0	0	0	(33, 8)	0	0	0	0	0
(34, 7)	0	0	0	0	0	(34, 8)	0	0	0	0	0
(35, 7)	0	0	0	0	0	(35, 8)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60NM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID FT	PART	SO2	NOX	HC	CO
(1, 3)	192	56	977	1233	6327	(1, 10)	236	64	1464	1964	8874
(2, 3)	308	23	403	593	2797	(2, 10)	5	2	1477	243	20
(3, 3)	986	114	1409	1582	8568	(3, 10)	3266	510	4623	6147	26482
(4, 3)	10349	604	11553	7712	37453	(4, 10)	2509	210	2376	1958	11704
(5, 3)	4984	2987	10065	9523	39225	(5, 10)	6733	2645	5604	10746	21278
(6, 3)	1597	93	1181	1330	5365	(6, 10)	457	282	3321	3695	18615
(7, 3)	1641	130	2566	1300	6584	(7, 10)	6702	565	3254	8242	25117
(8, 3)	6160	1605	11165	21432	57098	(8, 10)	1465	553	8836	11981	97093
(9, 3)	627	272	4267	7181	25507	(9, 10)	2679	12741	8363	22618	38918
(10, 3)	910	239	4990	4673	20566	(10, 10)	5136	6102	22458	22458	90288
(11, 3)	6217	1400	12205	16721	58018	(11, 10)	413	102	1553	2558	11780
(12, 3)	1108	896	12530	4308	20023	(12, 10)	2245	102	3407	5003	22900
(13, 3)	4734	6931	8658	12231	46938	(13, 10)	2766	485	4174	5403	22443
(14, 3)	3363	2231	7112	1524	26553	(14, 10)	9363	2106	9126	8706	41450
(15, 3)	43664	6272	11181	5087	43295	(15, 10)	1905	363	3554	3557	16456
(16, 3)	17581	21376	32405	15046	81066	(16, 10)	7540	7030	14404	12543	55838
(17, 3)	838	316	4781	5579	32513	(17, 10)	4095	2576	6656	8267	37751
(18, 3)	3751	5761	10770	3740	34130	(18, 10)	1503	239	3815	4743	21228
(19, 3)	15297	5040	7115	11038	63263	(19, 10)	5442	244	5254	6658	31277
(20, 3)	10066	3929	7828	11321	48056	(20, 10)	2402	47491	9915	9915	21051
(21, 3)	7132	13423	3600	5551	25509	(21, 10)	2151	903	3932	6009	28482
(22, 3)	3775	2151	7086	10843	48062	(22, 10)	5437	2676	11403	16502	62882
(23, 3)	2001	4081	3445	5241	21670	(23, 10)	3564	851	5973	9636	47132
(24, 3)	12588	5216	11564	33587	76684	(24, 10)	11289	694	3037	4989	22154
(25, 3)	6767	9888	13983	18046	99725	(25, 10)	4388	7860	13480	16973	84361
(26, 3)	2558	882	5314	8455	41188	(26, 10)	3043	1009	8598	13874	70506
(27, 3)	4160	3468	12141	15429	88792	(27, 10)	2935	774	5868	5025	41589
(28, 3)	2685	16227	10317	6523	30937	(28, 10)	10745	35448	19674	11171	67932
(29, 3)	25220	65839	58476	48838	213304	(29, 10)	0	0	0	0	0
(30, 3)	1445	342	2115	4132	19629	(30, 10)	0	0	0	0	0
(31, 3)	0	0	0	0	0	(31, 10)	0	0	0	0	0
(32, 3)	0	0	0	0	0	(32, 10)	0	0	0	0	0
(33, 3)	0	0	0	0	0	(33, 10)	0	0	0	0	0
(34, 3)	0	0	0	0	0	(34, 10)	0	0	0	0	0
(35, 3)	0	0	0	0	0	(35, 10)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID FT	PART	SO2	NOX	HC	CO
(1.11)	534	272	2252	2764	12923	(1.12)	10922	111	1254	1578	9020
(2.11)	44	13	170	244	1157	(2.12)	0	0	0	0	0
(3.11)	0	0	0	0	0	(3.12)	82	55	1382	872	3870
(4.11)	5597	5790	29610	32482	233175	(4.12)	1553	572	2979	2687	15332
(5.11)	5266	41433	39193	58613	592090	(5.12)	2337	1212	6399	6154	18176
(6.11)	956	1461	5565	70106	121117	(6.12)	243	276	2500	1456	8301
(7.11)	374	400	1595	2422	12764	(7.12)	410	127	4740	2560	13009
(8.11)	2956	451	4727	7679	38037	(8.12)	26556	189	2281	3593	17571
(9.11)	1697	372	25969	13719	35745	(9.12)	11316	4119	12015	20700	53536
(10.11)	9887	8579	65511	95519	424699	(10.12)	1171	7866	5948	13173	65866
(11.11)	4865	1678	5117	11866	66330	(11.12)	21697	12187	41741	50340	236623
(12.11)	327	88	1138	1843	7806	(12.12)	2825	974	12150	13429	63722
(13.11)	6387	1031	8443	11216	52721	(13.12)	5230	1306	4469	6294	26308
(14.11)	2423	180	1894	2430	11332	(14.12)	8350	390	4362	6368	29626
(15.11)	28390	10825	35711	30772	138256	(15.12)	2567	680	5097	7644	38316
(16.11)	20223	680	7883	8667	44518	(16.12)	9573	1645	4490	5972	29552
(17.11)	4642	9703	19545	11635	44356	(17.12)	3415	1972	10989	13401	63249
(18.11)	3445	336	5653	7036	31818	(18.12)	8824	77121	95242	10964	32866
(19.11)	3796	445	4444	6134	27316	(19.12)	4695	301	5401	7144	33056
(20.11)	21910	934	7918	12131	47930	(20.12)	4419	1582	9958	13489	68843
(21.11)	15258	62513	37005	11470	56023	(21.12)	4910	61136	39310	11543	54296
(22.11)	59357	198941	87470	57065	317407	(22.12)	3397	1455	8732	13292	63913
(23.11)	39859	17845	8430	13312	65083	(23.12)	49485	8566	15332	22036	186475
(24.11)	4657	5549	11127	15752	73562	(24.12)	7222	116451	34877	14861	80432
(25.11)	4202	2464	10113	16523	77990	(25.12)	10431	7936	45219	76937	375350
(26.11)	5719	19087	16619	15741	82874	(26.12)	11464	65836	36648	15773	79509
(27.11)	2513	664	4406	7434	35498	(27.12)	8282	1944	7747	12370	59843
(28.11)	9393	12061	7152	9563	54186	(28.12)	3346	1749	7551	12181	60266
(29.11)	3913	1475	5536	11000	51752	(29.12)	12186	37722	30979	22748	138678
(30.11)	0	0	0	0	0	(30.12)	33	31	5	0	0
(31.11)	0	0	0	0	0	(31.12)	0	0	0	0	0
(32.11)	0	0	0	0	0	(32.12)	0	0	0	0	0
(33.11)	0	0	0	0	0	(33.12)	0	0	0	0	0
(34.11)	0	0	0	0	0	(34.12)	0	0	0	0	0
(35.11)	0	0	0	0	0	(35.12)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60NM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	EC	GRID PT	PART	S02	NOX	HC	CO
(1,13)	62	21	219	340	1684	(1,14)	938	18692	20408	1430	6076
(2,13)	2808	336	1241	1410	7265	(2,14)	5168	3886	9735	14011	26854
(3,13)	0	0	0	0	0	(3,14)	116	78	424	739	3983
(4,13)	1521	54	833	1189	5760	(4,14)	1690	96	1446	1932	10093
(5,13)	1209	205	3463	2640	10845	(5,14)	12835	395	6703	14431	130072
(6,13)	1588	60	1398	1850	9097	(6,14)	6278	826	5263	4403	22648
(7,13)	1225	116	1595	1981	10066	(7,14)	2110	124	1779	1647	7595
(8,13)	2654	257	3274	4876	23994	(8,14)	3398	248	3073	4460	19611
(9,13)	217	52028	850	2637	5133	(9,14)	13051	6640	26576	41175	138336
(10,13)	3358	7488	8676	24988	153307	(10,14)	6850	15784	16183	38794	42157
(11,13)	2371	574	18064	8997	44712	(11,14)	10497	8377	10656	13004	43443
(12,13)	9525	3165	8995	9153	44013	(12,14)	23764	63397	24320	18391	86472
(13,13)	9241	1260	10748	14570	73324	(13,14)	6407	1632	10701	15105	73245
(14,13)	3650	162	2360	5063	23965	(14,14)	5204	2360	3752	7476	16260
(15,13)	3017	320	3323	6504	32232	(15,14)	12173	1704	3456	7940	23015
(16,13)	3708	572	5116	10630	39905	(16,14)	4060	414	2413	3986	16944
(17,13)	6564	539	5516	6211	31116	(17,14)	3023	1553	7090	9028	46449
(18,13)	15606	12149	48150	66123	317384	(18,14)	6986	73580	22316	13011	61058
(19,13)	2918	1358	11447	34187	61082	(19,14)	6202	2346	13371	17082	78081
(20,13)	10766	225853	15450	18183	83102	(20,14)	98205	258022	38461	6426	95886
(21,13)	17016	39625	21336	46113	57416	(21,14)	12296	14944	14973	16231	82411
(22,13)	9245	4666	19567	25894	37416	(22,14)	214072	214564	7850	9611	46495
(23,13)	11100	120761	10049	19569	128506	(23,14)	28461	13941	29445	43441	205490
(24,13)	32231	192152	58469	23364	100026	(24,14)	4488	32514	6726	9575	42185
(25,13)	8663	6615	35175	56244	248509	(25,14)	5896	3073	13539	22550	39511
(26,13)	3244	800	5998	10449	47221	(26,14)	5276	3253	11715	22570	82053
(27,13)	14545	39183	27071	24082	155272	(27,14)	10040	5255	16877	28527	115479
(28,13)	9223	13709	11618	6033	23552	(28,14)	14008	50849	44147	38096	138093
(29,13)	5886	16182	15237	10611	27222	(29,14)	36170	9755	10759	17793	61775
(30,13)	10856	20784	16918	27239	112165	(30,14)	19743	86207	35493	35443	113341
(31,13)	0	0	0	0	0	(31,14)	0	0	0	0	0
(32,13)	0	0	0	0	0	(32,14)	0	0	0	0	0
(33,13)	0	0	0	0	0	(33,14)	0	0	0	0	0
(34,13)	0	0	0	0	0	(34,14)	0	0	0	0	0
(35,13)	0	0	0	0	0	(35,14)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 90NM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,15)	1817	10742	11852	2704	13418	(1,16)	6492	6896	23378	23312	120083
(2,15)	4402	1772	13590	22479	180667	(2,16)	2163	1167	9316	14903	81405
(3,15)	200	52	852	1422	6584	(3,16)	70	39	607	948	6591
(4,15)	1736	62	560	791	4077	(4,16)	1818	76	1285	1464	7100
(5,15)	5338	238	2297	2676	18109	(5,16)	2209	64	2186	1405	7136
(6,15)	996	46	642	794	3566	(6,16)	2797	199	3413	3531	18031
(7,15)	2183	114	1937	2134	9521	(7,16)	3390	409	4731	5876	26702
(8,15)	7360	2414	16368	11383	47840	(8,16)	892	217	2157	3298	15468
(9,15)	4845	2415	8210	10385	33172	(9,16)	4256	1352	12824	15749	62777
(10,15)	5138	727	5176	12032	47010	(10,16)	2218	239	1956	4452	18272
(11,15)	4300	3974	3965	5332	22311	(11,16)	29103	15699	58551	56082	161744
(12,15)	27825	2313	33946	20117	27552	(12,16)	9446	4885	39398	50790	259977
(13,15)	1322	591	2833	3456	17854	(13,16)	11294	4865	55241	7979	42588
(14,15)	3937	1367	4158	5937	27093	(14,16)	9544	4107	6662	12582	49203
(15,15)	17051	1903	3325	10702	33412	(15,16)	15190	2356	5250	10713	37855
(16,15)	73485	68928	13579	9937	15018	(16,16)	12713	11657	19087	20181	92526
(17,15)	6613	2204	6150	7532	39308	(17,16)	12313	481766	140714	15454	71722
(18,15)	67183	432993	113605	11934	65866	(18,16)	15893	10781	9823	10131	47743
(19,15)	71284	10079	8748	18417	41844	(19,16)	15843	47317	8103	11309	57603
(20,15)	7893	268872	39172	19578	46176	(20,16)	5830	480701	156434	14524	62496
(21,15)	33294	231133	61766	86569	24232	(21,16)	12892	3703	8643	14801	64563
(22,15)	4649	1970	8436	12276	54292	(22,16)	6100	840	3375	7361	23819
(23,15)	55238	191224	72196	15233	70074	(23,16)	5177	4062	6111	10236	34417
(24,15)	5816	7897	11945	13525	87356	(24,16)	12503	11400	29821	33866	185646
(25,15)	11042	13022	12891	3644	62904	(25,16)	17118	8806	13584	13844	65753
(26,15)	23912	34867	47700	24530	234509	(26,16)	12340	29855	33908	25571	113754
(27,15)	8200	5243	11700	27434	71898	(27,16)	110933	205075	132217	64497	312307
(28,15)	16462	12042	10274	15281	12641	(28,16)	12942	6777	15378	22829	95951
(29,15)	37331	15577	24351	33260	122161	(29,16)	20446	2243	8103	15045	60407
(30,15)	3910	8727	11014	11434	39964	(30,16)	22000	8103	15781	33541	134596
(31,15)	0	0	0	0	0	(31,16)	40129	46700	25054	13737	75757
(32,15)	0	0	0	0	0	(32,16)	0	0	0	0	0
(33,15)	0	0	0	0	0	(33,16)	0	0	0	0	0
(34,15)	0	0	0	0	0	(34,16)	0	0	0	0	0
(35,15)	0	0	0	0	0	(35,16)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80MM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1.17)	16301	15941	57529	71395	382614	(1.18)	4099	8024	4766	8134	30297
(2.17)	3406	24590	35731	18602	104055	(2.18)	317	56	562	640	335
(3.17)	67	30	531	749	4305	(3.19)	771	244	2582	3630	21903
(4.17)	2797	699	5329	2247	12373	(4.20)	9492	532	5777	6748	35423
(5.17)	1246	127	1051	1219	6072	(5.21)	517	16	191	205	1101
(6.17)	4554	411	3223	3685	19364	(6.22)	44136	822	4586	3114	17608
(7.17)	3622	1177	4703	19432	16887	(7.23)	20312	978	8519	30854	50183
(8.17)	10093	3384	6324	7659	37627	(8.24)	7293	654	7630	14874	37374
(9.17)	4882	516	3108	3756	19609	(9.25)	9598	15706	21624	13034	98727
(10.17)	5320	764	5183	8606	36569	(10.26)	5046	595	6054	16667	35051
(11.17)	10515	3732	18272	20835	91378	(11.27)	2336	1719	4752	5105	29871
(12.17)	48304	143816	79163	60677	186274	(12.28)	7336	1596	4740	5951	32520
(13.17)	6400	4513	6484	7635	43273	(13.29)	7702	5344	4719	5224	28407
(14.17)	15168	105061	20701	9770	47453	(14.30)	6289	2712	5164	6085	33916
(15.17)	9280	11799	6466	7737	32017	(15.31)	29516	2712	33284	23364	71334
(16.17)	123106	719451	209109	174136	659952	(16.32)	10759	56780	21084	12229	64300
(17.17)	15179	30437	32003	42380	179365	(17.33)	25330	318701	125154	15947	82998
(18.17)	3793	6326	9612	13558	68055	(18.34)	4331	1742	6555	10753	54957
(19.17)	27904	201793	59179	40115	167317	(19.35)	79711	729614	72490	21769	94189
(20.17)	27983	243015	50597	17475	68437	(20.36)	9653	9980	12449	18537	76514
(21.17)	10404	10200	10951	32599	72331	(21.37)	179207	448199	141375	123562	326351
(22.17)	10103	1561	12457	10831	51394	(22.38)	33251	82879	35943	38909	143718
(23.17)	29868	35865	17996	15136	71943	(23.39)	11234	10227	13959	13940	65562
(24.17)	172632	4290	7279	11581	44609	(24.40)	35086	1760	7245	8302	37540
(25.17)	69566	110224	77483	40309	144867	(25.41)	89989	29070	26083	14622	58201
(26.17)	5461	5209	12459	16881	79070	(26.42)	8640	2562	7180	9600	42087
(27.17)	6270	5079	13300	16529	72309	(27.43)	13435	62476	40133	19124	64024
(28.17)	42237	34425	52434	101267	255343	(28.44)	25446	36936	44145	39717	131829
(29.17)	25382	24854	17167	13560	64852	(29.45)	12656	79656	55442	45321	218930
(30.17)	7795	5345	13474	24168	105268	(30.46)	6995	29494	29815	30567	142770
(31.17)	8035	2582	12342	19245	91940	(31.47)	8317	17611	17072	20663	103285
(32.17)	1106	933	3718	4688	18186	(32.48)	384	375	2229	1538	5208
(33.17)	0	0	0	0	0	(33.49)	0	0	0	0	0
(34.17)	0	0	0	0	0	(34.50)	0	0	0	0	0
(35.17)	0	0	0	0	0	(35.51)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 90NM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,19)	393	436	3808	2544	10032	(1,20)	393	130	1372	1498	6598
(2,19)	2318	682	4802	4104	26835	(2,20)	441	201	1853	1628	6867
(3,19)	1188	168	1287	870	3975	(3,20)	1158	290	2529	2854	15017
(4,19)	196	79	749	826	3009	(4,20)	0	0	0	0	0
(5,19)	78	82	657	457	2324	(5,20)	181	52	572	882	4895
(6,19)	1579	154	1489	1053	8783	(6,20)	200	73	821	968	5084
(7,19)	3372	375	2958	2666	12750	(7,20)	1022	133	1388	1772	9630
(8,19)	5226	448	4529	5307	28042	(8,20)	3191	471	4429	5563	23990
(9,19)	27696	1208	9210	9625	51427	(9,20)	18084	16874	15514	5354	30278
(10,19)	41747	20120	53601	65687	271818	(10,20)	5493	766	5770	8145	46955
(11,19)	1743	720	6506	3769	54987	(11,20)	4135	584	4213	6150	34976
(12,19)	1447	1206	3344	4796	26824	(12,20)	31365	35500	32428	36141	176029
(13,19)	2818	2205	7450	10374	55835	(13,20)	10078	15718	14241	49928	75593
(14,19)	2212	1236	6907	7794	40617	(14,20)	4362	1111	8267	12149	65484
(15,19)	29579	35048	11557	9445	42897	(15,20)	22890	25994	19257	15052	72041
(16,19)	42202	70892	32231	21955	105112	(16,20)	90666	50857	209677	123757	183388
(17,19)	36344	60803	27361	18070	92111	(17,20)	59198	5220	16253	22621	108771
(18,19)	19733	11514	14730	20376	93758	(18,20)	16134	29924	15843	16583	88999
(19,19)	33584	217279	59246	23431	99396	(19,20)	14129	28230	43788	22615	107216
(20,19)	16153	45617	32709	38115	153095	(20,20)	60053	192036	93831	113382	640850
(21,19)	158093	466011	122390	26306	71580	(21,20)	10004	19570	20443	26889	123373
(22,19)	128634	203125	104995	168520	468572	(22,20)	94053	80570	97168	113048	426503
(23,19)	10734	164912	51910	10326	62075	(23,20)	38283	66131	22114	19157	95310
(24,19)	62013	94427	49554	46615	107313	(24,20)	57326	402097	132032	15007	77612
(25,19)	5826	27032	20170	9177	48162	(25,20)	40371	139378	81786	20751	38082
(26,19)	63160	26515	22616	22129	65312	(26,20)	2959	1841	4625	4936	21255
(27,19)	44153	12857	22409	22547	58262	(27,20)	7867	14653	17078	13764	66926
(28,19)	90113	6980	13393	18035	90250	(28,20)	10859	13566	10660	14633	50528
(29,19)	7626	2770	8805	10832	48445	(29,20)	21418	25741	29220	37032	143282
(30,19)	14431	9257	9422	14512	57160	(30,20)	16150	149094	61718	37780	67597
(31,19)	13157	12348	10727	20523	65121	(31,20)	25223	5180	68618	112245	377135
(32,19)	1697	882	6579	6977	22256	(32,20)	438	434	2551	1669	5598
(33,19)	0	0	0	0	0	(33,20)	0	0	0	0	0
(34,19)	0	0	0	0	0	(34,20)	0	0	0	0	0
(35,19)	0	0	0	0	0	(35,20)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 90 KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	KO	GRID PT	PART	SO2	NOX	HC	CO
(1, 21)	757	174	1756	2209	10008	(1, 22)	3812	382	3642	6909	35263
(2, 21)	736	413	684	317	4892	(2, 22)	2016	584	1258	1278	9292
(3, 21)	118	39	391	552	2793	(3, 22)	11075	4774	5040	7581	29963
(4, 21)	173	17	298	464	2745	(4, 22)	86	34	519	758	4114
(5, 21)	79	31	423	615	3436	(5, 22)	127	48	706	1060	6445
(6, 21)	828	144	1291	2151	13232	(6, 22)	334	115	1310	2152	12396
(7, 21)	467	131	1055	1635	9676	(7, 22)	610	441	2669	4014	24900
(8, 21)	3119	456	3072	5586	30397	(8, 22)	1495	428	3230	4911	31239
(9, 21)	7079	1555	7704	7737	44275	(9, 22)	7147	3377	11252	16336	80408
(10, 21)	4888	1260	9392	14723	74285	(10, 22)	6506	5470	5857	7332	40086
(11, 21)	12537	3206	9407	20422	57168	(11, 22)	39312	481	3493	6366	31533
(12, 21)	11885	10542	11810	15136	83863	(12, 22)	13957	15365	4664	10563	57147
(13, 21)	7218	15256	18575	19117	112778	(13, 22)	2184	1309	7902	10935	65659
(14, 21)	19265	28300	29627	29074	146528	(14, 22)	6042	59586	28389	14092	75917
(15, 21)	32905	111258	75368	60101	184574	(15, 22)	4276	6593	5854	4642	47594
(16, 21)	12512	16988	15855	20481	111861	(16, 22)	20639	56571	43372	104139	205438
(17, 21)	119183	211757	94714	34212	249270	(17, 22)	90040	59520	79783	145547	346830
(18, 21)	55414	37567	44290	58850	270308	(18, 22)	215653	631124	64929	526028	2349681
(19, 21)	12560	11450	14078	18342	90293	(19, 22)	23562	28514	49567	73353	316567
(20, 21)	21385	26954	26266	41461	160229	(20, 22)	17991	17909	31020	58911	213740
(21, 21)	13594	14905	741594	27106	128607	(21, 22)	29274	36252	22466	29922	130801
(22, 21)	30500	21671	27056	36888	186486	(22, 22)	62198	22244	21170	29832	194602
(23, 21)	59795	59801	58137	95426	419045	(23, 22)	23229	21142	26418	35723	181786
(24, 21)	127914	557484	116819	18140	52382	(24, 22)	46504	23074	49645	17420	93593
(25, 21)	10661	82004	21713	17564	78061	(25, 22)	201115	627194	143506	43211	216691
(26, 21)	6796	225298	132773	11212	62752	(26, 22)	17003	284064	82890	24878	117691
(27, 21)	3568	1606	4587	5687	25674	(27, 22)	16663	186266	61560	12514	56540
(28, 21)	21067	4708	9627	12233	54139	(28, 22)	83353	64770	33272	17652	76911
(29, 21)	7806	4782	15710	25049	101366	(29, 22)	37405	181462	158020	169873	815962
(30, 21)	4808	7308	6394	9907	52675	(30, 22)	6531	71655	26527	11568	45891
(31, 21)	7700	72402	16348	3664	81671	(31, 22)	1896	2373	8235	12627	55558
(32, 21)	0	0	0	0	0	(32, 22)	0	0	0	0	0
(33, 21)	0	0	0	0	0	(33, 22)	0	0	0	0	0
(34, 21)	0	0	0	0	0	(34, 22)	0	0	0	0	0
(35, 21)	0	0	0	0	0	(35, 22)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1.23)	145	85	84.3	6.71	268.0	(1.24)	3072	104	1357	4795	22818
(2.23)	1611	108	158.0	2318	1739.3	(2.24)	5727	20	269	423	2738
(3.23)	173	63	97.0	1635	1018.1	(3.24)	65	47	404	687	497.3
(4.23)	323	55	44.3	6.94	432.0	(4.24)	172	73	52.4	510	517.8
(5.23)	304	48	49.1	9.51	521.8	(5.24)	661	585	101.3	1488	818.6
(6.23)	343	205	144.6	24.59	1449.2	(6.24)	372	212	131.9	2032	1260.1
(7.23)	1384	100	129.3	20.51	1240.3	(7.24)	4953	414	2927	9832	2765.3
(8.23)	1061	376	294.7	4962	3002.4	(8.24)	1865	479	2983	6610	2933.6
(9.23)	2081	652	74.7	11.45	630.2	(9.24)	7295	2775	4986	5780	3518.7
(10.23)	2127	0	0	0	0	(10.24)	7636	1590	885	22	7.8
(11.23)	5496	2458	409.8	53.81	2094.4	(11.24)	6330	1918	6698	86875	4517.4
(12.23)	1306	2794	351.5	27.91	1436.2	(12.24)	8617	5643	9351	93191	9416.8
(13.23)	3793	6898	662.2	8385	3832.1	(13.24)	38631	38859	13684	11899	6257.6
(14.23)	27303	62134	1651.3	17211	69680	(14.24)	3023	903	2872	4586	2305.8
(15.23)	2465	2282	510.8	72.93	4229.0	(15.24)	9572	35043	16916	14513	7840.3
(16.23)	14902	21231	2818.3	34769	18440.8	(16.24)	11655	12291	15216	20476	135315
(17.23)	11671	222975	12170.7	153830	60388.3	(17.24)	12857	100581	51419	39581	16075.5
(18.23)	0	0	0	0	0	(18.24)	2847	99475	16744	4693	21715
(19.23)	12553	21221	3456.4	36145	15460.3	(19.24)	44735	131724	73898	84111	32781.6
(20.23)	13770	15907	4041.2	51617	19763.5	(20.24)	14914	71276	49557	61610	244315
(21.23)	57555	376747	12731.7	91576	38173.2	(21.24)	86094	173760	287260	408064	1694550
(22.23)	91589	159013	3648.7	33374	11413.5	(22.24)	30330	45379	69725	85164	409596
(23.23)	22392	813610	16379.4	216875	80495.7	(23.24)	18795	223769	43161	16692	74407
(24.23)	229514	316702	143198	226012	81623.2	(24.24)	11952	93710	23336	27778	70092
(25.23)	171371	557360	29678.3	53332	73286.3	(25.24)	13215	23194	23025	22629	110104
(26.23)	117973	1177986	27034.4	10230	29261.9	(26.24)	20403	82216	26035	12816	58820
(27.23)	19535	6126	880.9	10230	52265	(27.24)	67796	2843	18695	15108	86960
(28.23)	46855	77155	3710.8	36337	15447.3	(28.24)	44354	33876	2917	26741	145760
(29.23)	45321	99227	18127.7	298540	96624.3	(29.24)	56501	545623	168573	61931	33638.3
(30.23)	4591	15097	1502.0	19550	8466.7	(30.24)	95244	443793	289211	412657	144437.1
(31.23)	5920	27478	1346.9	10577	4975.4	(31.24)	7920	38705	23727	16268	68786
(32.23)	2	0	0	0	0	(32.24)	0	0	0	0	0
(33.23)	0	0	0	0	0	(33.24)	0	0	0	0	0
(34.23)	0	0	0	0	0	(34.24)	0	0	0	0	0
(35.23)	0	0	0	0	0	(35.24)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80 KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HIC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,25)	150	170	1160	1181	5265	(1,26)	252	230	1658	1703	7846
(2,25)	203	148	1187	1345	7690	(2,28)	267	117	927	1194	6328
(3,25)	2113	150	943	1116	7137	(3,28)	1502	1321	2441	2367	13902
(4,25)	636	144	581	635	4614	(4,28)	1613	20675	15783	3852	21715
(5,25)	284	193	1237	1728	10299	(5,28)	2676	6193	6187	5262	29187
(6,25)	517	305	1429	1824	12585	(6,28)	1366	624	2245	2644	15340
(7,25)	872	335	1493	1537	10327	(7,28)	1382	539	2801	3679	22693
(8,25)	2793	750	3629	4967	31089	(8,28)	5975	1861	6155	7157	40048
(9,25)	424	138	823	1314	7875	(9,28)	2250	7926	4562	110	376
(10,25)	6487	2689	8008	12065	57021	(10,28)	426	272	875	1313	6518
(11,25)	373	1770	1474	1666	8490	(11,28)	11	0	0	0	0
(12,25)	3160	70938	44263	6015	25894	(12,28)	2544	4639	3700	4798	23045
(13,25)	5676	4612	8522	11331	60872	(13,28)	408	359	1419	2317	10273
(14,25)	9102	5020	6823	4536	25135	(14,28)	1871	5686	3734	1435	6901
(15,25)	32698	33479	53627	14835	75204	(15,28)	6173	2761	5297	7399	35828
(16,25)	25465	127782	54987	26833	142353	(16,28)	11834	7999	6180	6514	30966
(17,25)	31285	12458	7864	8619	85594	(17,28)	645	470	1397	3205	14663
(18,25)	2975	7816	6646	5546	27468	(18,28)	1615	2376	5981	7306	33617
(19,25)	1946	2492	7918	9124	43055	(19,28)	812	904	3801	4509	20371
(20,25)	61497	173812	81909	47563	279671	(20,28)	3201	18031	5090	7495	30022
(21,25)	2836	3161	12339	14179	72966	(21,28)	3788	24044	10458	13173	22529
(22,25)	43435	638613	151338	50744	126867	(22,28)	0	0	0	0	0
(23,25)	324	1416	319	112	1860	(23,28)	104	1336	390	26	9
(24,25)	18317	57562	19742	16451	79185	(24,28)	21013	155720	67194	31444	115051
(25,25)	22020	31506	42797	34165	185996	(25,28)	65673	65020	96337	100324	607988
(26,25)	8327	15351	12763	12010	59369	(26,28)	2029	1500	8648	12483	69991
(27,25)	4746	15450	5615	2935	15607	(27,28)	22303	16721	23673	21922	118640
(28,25)	42887	184781	61563	49457	277775	(28,28)	3292	2632	9835	15572	63488
(29,25)	80422	100426	62876	63636	357807	(29,28)	16666	53844	28524	20730	113392
(30,25)	72354	148311	202736	174137	913595	(30,28)	129259	355108	459422	522439	195148
(31,25)	9647	9824	40887	51583	241386	(31,28)	85681	183674	379111	406337	1526778
(32,25)	0	0	0	0	0	(32,28)	0	0	0	0	0
(33,25)	0	0	0	0	0	(33,28)	0	0	0	0	0
(34,25)	0	0	0	0	0	(34,28)	0	0	0	0	0
(35,25)	0	0	0	0	0	(35,28)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 80 KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1+27)	478	448	2653	2555	14247	(1+28)	222	199	1138	1536	6379
(2+27)	7000	16544	5074	3329	17696	(2+28)	360	5708	550	705	4406
(3+27)	108	0	0	1	0	(3+28)	668	0	712	799	4704
(4+27)	5064	1208	4015	2952	17399	(4+28)	1859	968	5011	6033	33946
(5+27)	769	369	1558	1347	12181	(5+28)	779	433	1637	1792	10369
(6+27)	3556	517	2696	3231	19848	(6+28)	1432	472	2702	3395	20449
(7+27)	2768	1453	5508	6453	36201	(7+28)	2861	1202	2843	3204	19337
(8+27)	6443	2646	2859	1331	8035	(8+28)	2173	0	348	29	76
(9+27)	0	0	0	0	0	(9+28)	0	0	0	0	0
(10+27)	0	0	0	0	0	(10+28)	3260	845	1603	71	4073
(11+27)	9435	32352	16085	233	987	(11+28)	11488	1373	3217	59	397
(12+27)	5687	5380	943	1494	734	(12+28)	91491	18230	20045	20071	114659
(13+27)	2040	7551	3678	3165	13645	(13+28)	0	0	0	0	0
(14+27)	6459	84661	5385	6126	25654	(14+28)	0	0	0	0	0
(15+27)	489	590	1888	2522	11399	(15+28)	601	2077	3269	4409	19080
(16+27)	32753	19187	11460	8370	38773	(16+28)	515	13712	4543	76	252
(17+27)	2630	4185	6981	4563	20244	(17+28)	279	287	813	1509	5992
(18+27)	113	2438	904	0	0	(18+28)	1099	1081	3607	6034	25826
(19+27)	3155	6954	9381	9533	42373	(19+28)	0	0	0	0	0
(20+27)	29396	27990	7444	4103	16254	(20+28)	52	749	152	7	0
(21+27)	5	35	46	6	0	(21+28)	258	3537	1145	79	7
(22+27)	234	2097	1075	3451	4412	(22+28)	307	2244	801	39	2
(23+27)	0	0	0	0	0	(23+28)	0	0	0	0	0
(24+27)	22443	228470	104526	87270	378709	(24+28)	0	0	0	0	0
(25+27)	2685	2348	5942	10370	52173	(25+28)	0	0	0	0	0
(26+27)	25242	61948	97284	93175	235007	(26+28)	0	0	0	0	0
(27+27)	45330	61419	64345	51165	257309	(27+28)	13635	40137	64592	13300	45532
(28+27)	12380	16207	22306	21600	104442	(28+28)	8180	9302	23601	35620	181754
(29+27)	3215	3421	14493	22033	117929	(29+28)	18552	32474	47216	47827	216288
(30+27)	12073	22179	68747	28133	121407	(30+28)	16023	62234	59086	90156	399397
(31+27)	32838	104889	147672	210443	930121	(31+28)	18248	96155	79251	90893	341543
(32+27)	44	2	93	56	5	(32+28)	16795	48714	55383	91842	380297
(33+27)	0	0	0	42	0	(33+28)	14	139	27	9	22
(34+27)	0	0	0	13	0	(34+28)	0	0	0	0	0
(35+27)	0	0	0	0	0	(35+28)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 35 BY 30 US-CANADIAN GRID
(GRID SPACING = 60MM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,29)	0	0	0	0	0	(1,30)	11406	7271	19403	31519	195630
(2,29)	501	556	1447	2374	14957	(2,30)	227	217	565	527	5442
(3,29)	56952	30449	23614	2693	15732	(3,30)	118	113	293	482	3038
(4,29)	160	130	866	353	2655	(4,30)	206	162	372	643	4341
(5,29)	178	145	207	332	2950	(5,30)	3793	2248	3409	2328	17445
(6,29)	196	130	186	353	2655	(6,30)	427	344	497	942	7082
(7,29)	196	130	186	353	2655	(7,30)	27274	13830	18140	33631	255870
(8,29)	871	87	124	235	1770	(8,30)	71	58	82	157	1100
(9,29)	392	172	876	1315	6915	(9,30)	0	0	0	0	0
(10,29)	0	0	0	0	0	(10,30)	0	0	0	0	0
(11,29)	0	0	0	0	0	(11,30)	0	0	0	0	0
(12,29)	0	0	0	0	0	(12,30)	0	0	0	0	0
(13,29)	0	0	0	0	0	(13,30)	0	0	0	0	0
(14,29)	0	0	0	0	0	(14,30)	17850	17850	8465	0	0
(15,29)	0	0	0	0	0	(15,30)	0	0	0	0	0
(16,29)	0	0	0	0	0	(16,30)	0	0	0	0	0
(17,29)	0	0	0	0	0	(17,30)	0	0	0	0	0
(18,29)	0	0	0	0	0	(18,30)	2670	260000	17850	0	0
(19,29)	125000	53600	44600	0	0	(19,30)	0	0	0	0	0
(20,29)	1	0	0	0	0	(20,30)	0	0	0	0	0
(21,29)	0	0	0	0	0	(21,30)	17850	1705000	8465	0	0
(22,29)	0	0	0	0	0	(22,30)	0	0	0	0	0
(23,29)	0	0	0	0	0	(23,30)	0	0	0	0	0
(24,29)	0	0	0	0	0	(24,30)	0	0	0	0	0
(25,29)	0	0	0	0	0	(25,30)	0	0	0	0	0
(26,29)	0	0	0	0	0	(26,30)	0	0	0	0	0
(27,29)	73482	2478	8132	11523	52749	(27,30)	7130	4030	6705	9111	43898
(28,29)	69	69	311	1413	4977	(28,30)	1031	2464	4559	4337	37595
(29,29)	4176	4229	14541	33136	52115	(29,30)	3190	4284	8353	11323	41343
(30,29)	2533	5458	8215	17143	47373	(30,30)	1056	1371	4996	7138	31125
(31,29)	21858	37556	58155	59482	206943	(31,30)	9557	22448	39326	52017	225153
(32,29)	53203	252311	267332	351294	1297541	(32,30)	5868	24242	32446	38601	158197
(33,29)	1505	31296	8745	615	2069	(33,30)	0	0	0	0	0
(34,29)	0	0	0	0	0	(34,30)	0	0	0	0	0
(35,29)	0	0	0	0	0	(35,30)	0	0	0	0	0

APPENDIX E
ANNUAL EMISSION GRIDS FOR REGIONAL AIR QUALITY SIMULATION STUDIES
IN THE NORTHEAST

Annual emissions expressed in tons of particulates, sulfur dioxide, nitrogen oxides, hydrocarbons, and carbon monoxide from point and area sources were apportioned to 20-km grid squares on a 40 by 40 grid network encompassing roughly the area from Columbus, Ohio to Portland, Maine and Richmond, Virginia to Ottawa, Ontario. Section E-1 contains the gridded point source emissions, Section E-2 the gridded area source emissions, while Section E-3 the gridded point and area source emissions of the five pollutants.

The first grid square listed in each section (1,1) refers to the grid square in the lower-left corner of the grid network depicted in Figures 12-21 of the text. Figure E-1 identifies X and Y coordinates of the center of each of the 1600 grid squares. Each page of data in the appendix contains the annual emissions from sources within the grid squares in two adjacent rows (X varies from 1 to 40).

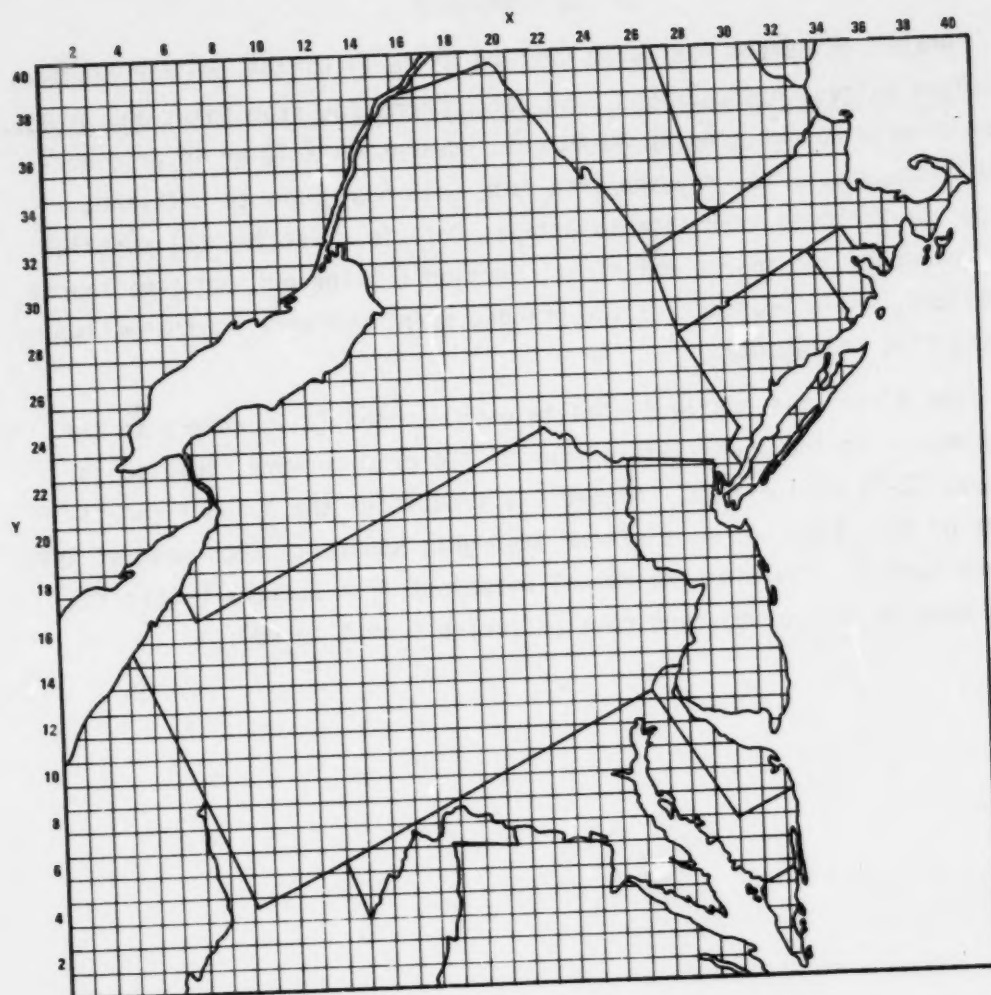


Figure E-1. The grid coordinates of the 40 by 40 grid network with a 20-km grid spacing.

SECTION E-1
GRIDDED POINT SOURCE EMISSIONS (TONS/YEAR) ON THE 20-KM GRID NETWORK

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20 MM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	IC	GRID FT	PART	SO2	NOX	HC	IC
(1, 1)	602	707	247	77	26	(1, 2)	1986	0	0	0	0
(2, 1)	0	0	0	0	0	(2, 3)	0	1980	0	0	0
(3, 1)	0	0	0	0	0	(3, 4)	92	0	0	0	0
(4, 1)	0	0	0	0	0	(4, 5)	75475	291312	67522	44	528
(5, 1)	10	0	0	0	0	(5, 6)	0	0	0	0	2103
(6, 1)	2342	53065	745	1065	45	(6, 7)	77	1153	266	9	13
(7, 1)	333	2042	250	11	26	(7, 8)	194	20041	3950	66	218
(8, 1)	0	0	0	0	0	(8, 9)	1	0	0	0	0
(9, 1)	0	0	0	0	0	(9, 10)	1598	1305	20	1	359
(10, 1)	2	0	0	3	7	(10, 11)	0	0	0	0	0
(11, 1)	44	1	7	3	0	(11, 12)	237	0	0	24	76
(12, 1)	0	0	0	0	0	(12, 13)	499	6	40	51	10151
(13, 1)	92	0	0	0	0	(13, 14)	0	0	0	0	0
(14, 1)	0	0	0	0	0	(14, 15)	442	0	0	0	0
(15, 1)	0	0	0	0	0	(15, 16)	0	0	0	0	0
(16, 1)	0	0	0	0	0	(16, 17)	1235	1	2	1	0
(17, 1)	10	21	33	117	5	(17, 18)	987	0	0	0	0
(18, 1)	371	223	95	6	12	(18, 19)	0	0	0	0	0
(19, 1)	464	1029	362	39	66	(19, 20)	16703	707	103	135	31
(20, 1)	0	0	0	130	0	(20, 21)	0	0	0	0	0
(21, 1)	2	5	8	0	1	(21, 22)	0	0	0	0	0
(22, 1)	563	0	0	0	0	(22, 23)	2	0	0	0	0
(23, 1)	0	0	0	0	0	(23, 24)	270	0	0	2	29
(24, 1)	616	356	131	25	11	(24, 25)	3	0	1	5	55
(25, 1)	4	0	1	7	62	(25, 26)	0	0	1	0	55
(26, 1)	0	0	0	27	0	(26, 27)	37	0	0	5	55
(27, 1)	0	0	0	0	0	(27, 28)	0	0	0	0	0
(28, 1)	2019	3403	1288	555	13392	(28, 29)	0	0	0	0	0
(29, 1)	0	0	0	0	0	(29, 30)	0	0	0	0	0
(30, 1)	0	0	0	0	0	(30, 31)	0	0	0	0	0
(31, 1)	0	0	0	0	0	(31, 32)	0	0	0	0	0
(32, 1)	0	0	0	0	0	(32, 33)	0	0	0	0	0
(33, 1)	0	0	0	0	0	(33, 34)	0	0	0	0	0
(34, 1)	0	0	0	0	0	(34, 35)	0	0	0	0	0
(35, 1)	0	0	0	0	0	(35, 36)	0	0	0	0	0
(36, 1)	0	0	0	0	0	(36, 37)	0	0	0	0	0
(37, 1)	0	0	0	0	0	(37, 38)	0	0	0	0	0
(38, 1)	0	0	0	0	0	(38, 39)	0	0	0	0	0
(39, 1)	0	0	0	0	0	(39, 40)	0	0	0	0	0
(40, 1)	0	0	0	0	0	(40, 41)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-C MATHIN GRID
(GRID SPACING = 20KM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1, 3)	1695	1646	232	69	30	(1, 4)	0	0	0	0	0
(2, 3)	94	453	911	0	0	(2, 4)	11	0	0	0	0
(3, 3)	27336	93966	26044	215	5921	(3, 4)	23562	206903	37116	390	130
(4, 3)	0	0	0	0	0	(4, 4)	1308	1940	209	14	32
(5, 3)	38	0	0	0	0	(5, 4)	6	0	0	0	0
(6, 3)	774	96	161	0	0	(6, 4)	51669	271724	77158	868	3122
(7, 3)	30	0	0	0	0	(7, 4)	0	0	0	0	0
(8, 3)	2	0	0	0	60	(8, 4)	0	0	0	0	0
(9, 3)	0	0	0	0	0	(9, 4)	626	0	0	0	0
(10, 3)	2652	221344	123216	672	2298	(10, 4)	56	9379	1940	80	57
(11, 3)	0	0	0	0	0	(11, 4)	1164	0	0	0	0
(12, 3)	43	0	0	0	0	(12, 4)	0	0	0	0	0
(13, 3)	30	0	0	0	0	(13, 4)	1525	107003	27105	452	1506
(14, 3)	11	0	0	0	0	(14, 4)	32	6	8	1	1
(15, 3)	0	0	0	0	0	(15, 4)	18	0	0	0	0
(16, 3)	0	0	0	0	0	(16, 4)	0	0	48	12	3
(17, 3)	84	2	3	0	0	(17, 4)	0	0	0	0	0
(18, 3)	14	235	36	2	2	(18, 4)	0	0	0	0	0
(19, 3)	0	0	0	0	0	(19, 4)	1352	0	0	0	0
(20, 3)	16	0	0	0	0	(20, 4)	0	0	0	0	0
(21, 3)	0	0	0	0	0	(21, 4)	463	44444	12473	1662	382
(22, 3)	946	4317	660	3584	44	(22, 4)	5783	61134	21369	457	758
(23, 3)	13	0	0	0	0	(23, 4)	0	0	0	0	0
(24, 3)	0	0	0	0	0	(24, 4)	0	0	0	0	0
(25, 3)	44	0	0	0	0	(25, 4)	0	0	0	0	0
(26, 3)	371	67	245	31	170	(26, 4)	0	0	0	0	0
(27, 3)	0	0	0	0	0	(27, 4)	0	0	0	0	0
(28, 3)	0	0	0	6	0	(28, 4)	0	0	0	0	0
(29, 3)	75	190	67	0	0	(29, 4)	0	0	0	0	0
(30, 3)	0	0	0	0	0	(30, 4)	0	0	0	0	0
(31, 3)	0	0	0	0	0	(31, 4)	0	0	0	0	0
(32, 3)	0	0	0	0	0	(32, 4)	0	0	0	0	0
(33, 3)	0	0	0	0	0	(33, 4)	0	0	0	0	0
(34, 3)	0	0	0	0	0	(34, 4)	0	0	0	0	0
(35, 3)	0	0	0	0	0	(35, 4)	0	0	0	0	0
(36, 3)	0	0	0	0	0	(36, 4)	0	0	0	0	0
(37, 3)	0	0	0	0	0	(37, 4)	0	0	0	0	0
(38, 3)	0	0	0	0	0	(38, 4)	0	0	0	0	0
(39, 3)	0	0	0	0	0	(39, 4)	0	0	0	0	0
(40, 3)	0	0	0	0	0	(40, 4)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

POINT SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CC	GRID PT	PART	S02	NOX	HC	EC
(1, 5)	0	0	0	0	0	(1, 6)	0	0	0	0	0
(2, 5)	2170	1710	226	150	8318	(2, 6)	0	0	0	0	0
(3, 5)	10	0	0	0	0	(3, 6)	8370	6330	593	39	79
(4, 5)	0	0	0	0	0	(4, 6)	898	995	0	0	0
(5, 5)	0	0	0	0	0	(5, 6)	0	0	0	0	0
(6, 5)	0	0	0	0	0	(6, 6)	0	0	0	0	0
(7, 5)	3843	85389	13372	201	793	(7, 6)	9736	11316	1957	88	193
(8, 5)	0	0	0	0	0	(8, 6)	98	1870	113	8	18
(9, 5)	0	0	0	0	0	(9, 6)	3692	18475	29171	496	1621
(10, 5)	0	0	0	0	0	(10, 6)	284	149	44	2	16
(11, 5)	4809	143868	26197	441	1463	(11, 6)	221	0	0	0	0
(12, 5)	954	25967	5650	129	324	(12, 6)	0	0	0	0	0
(13, 5)	0	0	0	0	0	(13, 6)	4	0	0	0	0
(14, 5)	0	0	0	0	0	(14, 6)	9931	75580	25378	1277	3065
(15, 5)	1	0	0	0	0	(15, 6)	0	0	0	0	0
(16, 5)	18	0	0	0	0	(16, 6)	0	0	0	0	0
(17, 5)	0	0	0	0	0	(17, 6)	313	0	6	3	11
(18, 5)	9308	0	0	231	1436	(18, 6)	12755	209	105	503	18
(19, 5)	14006	17797	5636	155	224	(19, 6)	762	0	0	0	0
(20, 5)	0	0	0	0	0	(20, 6)	0	0	0	0	0
(21, 5)	0	0	0	0	0	(21, 6)	83	2	43	171	33
(22, 5)	1867	103	45	78	3	(22, 6)	2014	928	457	8024	1353
(23, 5)	842	421	87	37	225	(23, 6)	2344	16444	8942	179	714
(24, 5)	236	1432	732	37	49	(24, 6)	0	1	1	0	0
(25, 5)	0	0	0	0	0	(25, 6)	4149	62915	13755	232	764
(26, 5)	0	0	0	0	0	(26, 6)	0	0	0	0	0
(27, 5)	91	498	291	13	16	(27, 6)	0	0	0	0	0
(28, 5)	0	0	0	0	0	(28, 6)	0	0	0	0	0
(29, 5)	0	0	0	0	0	(29, 6)	0	0	0	0	0
(30, 5)	0	0	0	0	0	(30, 6)	0	0	0	0	0
(31, 5)	0	0	0	0	0	(31, 6)	3	47	3	0	1
(32, 5)	26	358	71	8	5	(32, 6)	0	0	0	0	0
(33, 5)	0	0	0	0	0	(33, 6)	0	0	0	0	0
(34, 5)	0	0	0	0	0	(34, 6)	0	0	0	0	0
(35, 5)	0	0	0	0	0	(35, 6)	0	0	0	0	0
(36, 5)	0	0	0	0	0	(36, 6)	0	0	0	0	0
(37, 5)	0	0	0	0	0	(37, 6)	0	0	0	0	0
(38, 5)	0	0	0	0	0	(38, 6)	0	0	0	0	0
(39, 5)	0	0	0	0	0	(39, 6)	0	0	0	0	0
(40, 5)	0	0	0	0	0	(40, 6)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 4P BY 40 US-CANADIAN GRID
(GRID SPACING = 20NM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1, 7)	57	0	0	0	0	(1, 8)	226	4138	0	0	0
(2, 7)	518	202	98	2	12	(2, 8)	374	4164	0	0	0
(3, 7)	1554	2931	0	75	0	(3, 8)	21442	16336	3229	54674	46500
(4, 7)	160	400	0	0	0	(4, 8)	15	0	0	0	0
(5, 7)	0	0	0	0	0	(5, 8)	36	0	0	0	0
(6, 7)	0	0	0	0	0	(6, 8)	15472	437203	248	3	32
(7, 7)	21438	133825	18917	5043	24189	(7, 8)	22009	74984	79700	1084	3191
(8, 7)	2971	4840	2890	18	4392	(8, 8)	0	0	69566	892	33738
(9, 7)	495	309	339	613	1432	(9, 8)	814	1241	0	0	0
(10, 7)	1621	411	1429	202	35	(10, 8)	18255	161997	540	3111	14351
(11, 7)	221	230	117	210	43	(11, 8)	477	0	22155	325	1034
(12, 7)	0	0	0	0	0	(12, 8)	0	0	0	0	0
(13, 7)	0	0	0	0	0	(13, 8)	3212	0	0	0	0
(14, 7)	1608	0	0	0	0	(14, 8)	0	0	0	0	159
(15, 7)	101	904	432	22	29	(15, 8)	0	0	0	0	0
(16, 7)	2367	856	232	16	31	(16, 8)	0	0	0	0	0
(17, 7)	0	0	0	0	0	(17, 8)	0	0	0	0	0
(18, 7)	0	0	0	0	0	(18, 8)	0	0	0	0	0
(19, 7)	375	4114	1852	3	5	(19, 8)	860	5171	2245	66	162
(20, 7)	411	1174	220	12	14	(20, 8)	0	0	0	0	0
(21, 7)	21552	18066	12617	214	676	(21, 8)	1885	18002	2105	9	436
(22, 7)	13	0	0	0	0	(22, 8)	0	0	0	0	0
(23, 7)	1478	5963	3874	507	5546	(23, 8)	157	0	0	0	0
(24, 7)	1553	10162	3576	502	3471	(24, 8)	3848	114	563	29	39
(25, 7)	1	0	0	0	0	(25, 8)	0	0	0	0	0
(26, 7)	0	0	0	0	0	(26, 8)	0	0	0	0	0
(27, 7)	0	0	0	0	0	(27, 8)	14	46	191	18	49
(28, 7)	35	120	189	3	6	(28, 8)	1	0	0	0	0
(29, 7)	373	7020	5888	115	177	(29, 8)	280	6721	1132	540	75
(30, 7)	51	275	151	16	9	(30, 8)	94	0	0	0	0
(31, 7)	6	16	0	0	1	(31, 8)	0	0	0	0	0
(32, 7)	0	0	0	0	0	(32, 8)	0	0	0	0	0
(33, 7)	0	0	0	0	0	(33, 8)	0	0	0	0	0
(34, 7)	0	0	0	0	0	(34, 8)	0	0	0	0	0
(35, 7)	0	0	0	0	0	(35, 8)	0	0	0	0	0
(36, 7)	0	0	0	0	0	(36, 8)	0	0	0	0	0
(37, 7)	0	0	0	0	0	(37, 8)	0	0	0	0	0
(38, 7)	0	0	0	0	0	(38, 8)	0	0	0	0	0
(39, 7)	0	0	0	0	0	(39, 8)	0	0	0	0	0
(40, 7)	0	0	0	0	0	(40, 8)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20NM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID FT	PART	SO2	NOX	HC	CO
(1, 9)	282	750	13	81	0	(1,10)	611	1437	934	284	69
(2, 9)	13552	117673	12184	7607	181	(2,10)	365	494	0	1965	0
(3, 9)	40153	7005	776	839	33	(3,10)	323	0	0	0	1450
(4, 9)	2158	3006	341	92	97	(4,10)	4	0	0	200	0
(5, 9)	1160	0	0	0	7543	(5,10)	1241	193	33	287	39
(6, 9)	13	0	0	37	22	(6,10)	30623	107260	24698	251	835
(7, 9)	1872	33436	6953	4837	1461	(7,10)	207	2709	999	50	76
(8, 9)	40671	51462	12923	3061	7938	(8,10)	220	113	314	5	17
(9, 9)	35316	51449	21775	653	6251	(9,10)	3171	1375	272	233	36
(10, 9)	4708	5648	2002	620	5995	(10,10)	11530	5030	10153	186	3982
(11, 9)	19023	211839	38356	3127	21663	(11,10)	191	0	0	0	128
(12, 9)	0	0	0	0	0	(12,10)	5346	186915	32443	606	1897
(13, 9)	0	0	0	0	0	(13,10)	605	0	0	0	0
(14, 9)	0	0	0	0	0	(14,10)	0	0	0	0	0
(15, 9)	0	0	0	0	0	(15,10)	0	0	0	0	0
(16, 9)	4487	0	0	0	0	(16,10)	0	0	0	0	0
(17, 9)	2131	0	0	0	0	(17,10)	0	0	0	0	0
(18, 9)	14	169	24	2	3	(18,10)	2043	0	0	0	0
(19, 9)	217	638	182	0	84	(19,10)	1887	5162	856	17	5658
(20, 9)	8	0	0	0	0	(20,10)	527	229	33	3	9
(21, 9)	103	0	0	0	0	(21,10)	31402	40460	4420	0	0
(22, 9)	25	136	65	4	0	(22,10)	24	75	90	19	0
(23, 9)	66	11	225	2	3	(23,10)	13956	27215	24438	11133	100705
(24, 9)	4856	19316	19435	31330	2505	(24,10)	63	341	367	34	954
(25, 9)	1093	15952	18192	86389	702	(25,10)	450	490	486	17	28
(26, 9)	0	0	0	0	0	(26,10)	1	0	0	0	0
(27, 9)	0	0	0	0	0	(27,10)	0	0	0	0	0
(28, 9)	0	0	0	0	0	(28,10)	16	79	27	7	2
(29, 9)	168	11	0	0	0	(29,10)	20	43	262	54	52
(30, 9)	1446	86	25	123	0	(30,10)	36	558	53	5	6
(31, 9)	1230	25309	7364	124	410	(31,10)	0	0	0	0	0
(32, 9)	0	0	0	0	0	(32,10)	0	0	0	0	0
(33, 9)	0	0	0	0	0	(33,10)	0	0	0	0	0
(34, 9)	0	0	0	0	0	(34,10)	0	0	0	0	0
(35, 9)	0	0	0	0	0	(35,10)	0	0	0	0	0
(36, 9)	0	0	0	0	0	(36,10)	0	0	0	0	0
(37, 9)	0	0	0	0	0	(37,10)	2	0	0	0	0
(38, 9)	0	0	0	0	0	(38,10)	0	0	0	0	0
(39, 9)	0	0	0	0	0	(39,10)	0	0	0	0	0
(40, 9)	0	0	0	0	0	(40,10)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20 KM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,11)	37620	117419	30144	14241	45441	(1,12)	6502	175243	27167	1124	1454
(2,11)	242	1212	164	10	22	(2,12)	63	339	26	1	0
(3,11)	240	0	0	0	0	(3,12)	0	0	0	0	0
(4,11)	11325	7555	543	2171	10192	(4,12)	574	763	218	77	28
(5,11)	41022	80968	21285	9414	55803	(5,12)	154	0	0	0	0
(6,11)	1151	291	879	67	176	(6,12)	130	0	0	0	0
(7,11)	0	0	0	0	0	(7,12)	0	0	0	0	0
(8,11)	145	115	190	7	32	(8,12)	4100	8314	1517	53	128
(9,11)	350	0	0	0	0	(9,12)	0	0	0	0	0
(10,11)	13077	96169	25091	333	1711	(10,12)	0	0	0	0	0
(11,11)	3294	221628	49827	830	2768	(11,12)	0	0	0	0	0
(12,11)	31070	276873	54197	913	3064	(12,12)	0	0	0	0	0
(13,11)	189	0	0	0	0	(13,12)	0	0	0	0	0
(14,11)	918	0	0	0	0	(14,12)	34222	11158	3053	54	200
(15,11)	2277	1129	297	20	40	(15,12)	115	168	28	1	3
(16,11)	7009	2030	506	11	33	(16,12)	159	0	3	0	0
(17,11)	976	0	0	0	0	(17,12)	0	0	0	0	0
(18,11)	158	0	0	0	0	(18,12)	0	0	0	0	0
(19,11)	1196	125	99	7	13	(19,12)	6	103	16	1	1
(20,11)	0	0	0	0	0	(20,12)	0	0	0	0	0
(21,11)	552	10	3	0	1422	(21,12)	4264	12700	2640	399	857
(22,11)	0	0	0	0	0	(22,12)	0	0	0	0	0
(23,11)	0	0	0	0	0	(23,12)	6319	8405	2783	47	153
(24,11)	0	0	0	0	0	(24,12)	385	103	164	11	22
(25,11)	323	480	1030	79	205	(25,12)	21	0	2	0	0
(26,11)	0	0	0	0	0	(26,12)	69	0	0	0	0
(27,11)	0	0	0	0	0	(27,12)	0	0	0	0	0
(28,11)	396	6565	2352	49	77	(28,12)	148	0	0	0	0
(29,11)	35	0	0	0	0	(29,12)	0	0	0	0	0
(30,11)	112	121	72	4	5	(30,12)	242	168	56	4	4
(31,11)	0	0	0	0	0	(31,12)	0	0	0	0	0
(32,11)	0	0	0	0	0	(32,12)	0	0	0	0	0
(33,11)	0	0	0	0	0	(33,12)	0	0	0	0	0
(34,11)	0	0	0	0	0	(34,12)	0	0	0	0	0
(35,11)	0	0	0	0	0	(35,12)	0	0	0	0	0
(36,11)	0	0	0	0	0	(36,12)	0	0	0	0	0
(37,11)	0	0	0	0	0	(37,12)	0	0	0	0	0
(38,11)	0	0	0	0	0	(38,12)	0	0	0	0	0
(39,11)	0	0	0	0	0	(39,12)	0	0	0	0	0
(40,11)	0	0	0	0	0	(40,12)	0	0	0	0	0

ANNUAL EMISSION RATES (TONG/WEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,13)	4702	40297	6637	212	371	(1,14)	0	0	0	0	0
(2,13)	3216	7333	1070	12713	225	(2,14)	0	0	0	0	0
(3,13)	0	0	0	0	0	(3,14)	21331	78276	11797	255	765
(4,13)	270	0	0	0	0	(4,14)	0	0	0	95	0
(5,13)	0	0	0	0	0	(5,14)	0	0	0	0	0
(6,13)	0	0	0	0	0	(6,14)	4776	7792	3137	60	214
(7,13)	46	4	3	23	31	(7,14)	0	0	0	0	0
(8,13)	0	0	0	0	0	(8,14)	200	8115	569	182	75
(9,13)	605	42	0	0	0	(9,14)	0	0	0	0	0
(10,13)	66	0	0	0	0	(10,14)	0	0	0	0	0
(11,13)	325	6	1056	618	148	(11,14)	0	0	0	0	0
(12,13)	0	0	0	0	0	(12,14)	0	0	0	0	0
(13,13)	0	0	0	0	0	(13,14)	18013	76040	14914	253	813
(14,13)	0	0	0	0	0	(14,14)	22	75	8	1	1
(15,13)	12712	5326	1130	52	185	(15,14)	0	0	0	0	0
(16,13)	0	0	0	0	0	(16,14)	2339	2598	1558	36	221
(17,13)	0	0	0	0	0	(17,14)	1689	958	531	13	1810
(18,13)	0	0	0	0	0	(18,14)	0	0	0	0	0
(19,13)	0	0	0	0	0	(19,14)	1800	0	0	0	0
(20,13)	11349	1212	239	43	19	(20,14)	0	0	0	0	0
(21,13)	993	21095	8514	178	281	(21,14)	16001	3810	674	12	37
(22,13)	12506	381261	39186	1490	6029	(22,14)	5152	522	2	368	53
(23,13)	2351	77	32	2	3	(23,14)	354	3460	607	1471	1997
(24,13)	138	0	0	0	812	(24,14)	1593	23659	11529	388	4988
(25,13)	0	0	0	0	0	(25,14)	3607	2445	3458	77	7421
(26,13)	299	1193	525	3533	47	(26,14)	640	1498	456	32	35
(27,13)	17641	167477	22406	12771	3821	(27,14)	6163	47742	25027	14535	15371
(28,13)	0	0	0	0	0	(28,14)	7574	120465	24703	490	1363
(29,13)	3573	5933	2077	113	2376	(29,14)	269	185	28	1	4
(30,13)	572	0	0	0	271	(30,14)	27	33	60	2	2
(31,13)	4507	34635	6665	114	341	(31,14)	75	40	32	2	0
(32,13)	0	0	0	0	0	(32,14)	0	0	0	0	0
(33,13)	0	0	0	0	0	(33,14)	0	0	0	0	0
(34,13)	0	0	0	0	0	(34,14)	0	0	0	0	0
(35,13)	0	0	0	0	0	(35,14)	0	0	0	0	0
(36,13)	0	0	0	0	0	(36,14)	0	0	0	0	0
(37,13)	0	0	0	0	0	(37,14)	0	0	0	0	0
(38,13)	0	0	0	0	0	(38,14)	0	0	0	0	0
(39,13)	0	0	0	0	0	(39,14)	0	0	0	0	0
(40,13)	0	0	0	0	0	(40,14)	0	0	0	0	0

MINIMAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,15)	0	0	0	0	0	(1,16)	0	0	0	0	0
(2,15)	0	0	0	0	0	(2,16)	0	0	0	0	0
(3,15)	0	0	0	0	0	(3,16)	3	0	0	0	0
(4,15)	0	15	0	0	0	(4,16)	755	1156	30	544	193
(5,15)	0	0	0	0	0	(5,16)	0	0	135	0	0
(6,15)	0	0	0	0	0	(6,16)	0	0	0	0	0
(7,15)	43	0	0	49	66	(7,16)	9344	0	0	0	0
(8,15)	0	0	0	0	0	(8,16)	0	0	0	0	0
(9,15)	0	0	0	0	0	(9,16)	0	0	0	0	0
(10,15)	0	0	0	0	0	(10,16)	348	976	1735	106	216
(11,15)	0	0	0	0	0	(11,16)	0	0	0	0	0
(12,15)	0	0	0	0	0	(12,16)	0	0	0	0	0
(13,15)	0	0	0	0	0	(13,16)	0	0	0	0	0
(14,15)	0	0	0	0	0	(14,16)	0	0	0	0	0
(15,15)	0	0	0	0	0	(15,16)	2723	14423	3257	266	495
(16,15)	13541	3190	816	21	44	(16,16)	0	0	0	0	0
(17,15)	0	0	0	0	0	(17,16)	0	0	0	0	0
(18,15)	0	0	0	0	0	(18,16)	18874	138894	13551	260	800
(19,15)	0	0	0	0	0	(19,16)	0	0	0	0	0
(20,15)	0	0	0	0	0	(20,16)	0	0	0	0	0
(21,15)	0	0	0	0	0	(21,16)	91	774	213	257	76
(22,15)	654	0	0	0	696	(22,16)	239	0	0	257	2036
(23,15)	487	0	0	0	618	(23,16)	15802	17213	2857	431	967
(24,15)	2968	94616	12938	219	0	(24,16)	276	4610	1116	61	1168
(25,15)	3	2611	416	21	45	(25,16)	17363	1678	528	70	110
(26,15)	1181	1213	580	29	0	(26,16)	6363	5740	2413	2769	1440
(27,15)	10071	26799	24836	26736	110453	(27,16)	3101	21734	16133	4870	10220
(28,15)	3487	13484	16564	120768	59430	(28,16)	212	513	641	120	41
(29,15)	713	63	19	17	1	(29,16)	0	0	0	0	0
(30,15)	0	1	1	0	0	(30,16)	0	0	0	0	0
(31,15)	0	0	0	0	0	(31,16)	0	18	0	1	0
(32,15)	0	0	0	0	0	(32,16)	0	0	0	0	0
(33,15)	0	0	0	0	0	(33,16)	0	0	0	0	0
(34,15)	0	0	0	0	0	(34,16)	0	0	0	0	0
(35,15)	0	0	0	0	0	(35,16)	0	0	0	0	0
(36,15)	0	0	0	0	0	(36,16)	0	0	0	0	0
(37,15)	0	0	0	0	0	(37,16)	0	0	0	0	0
(38,15)	0	0	0	0	0	(38,16)	0	0	0	0	0
(39,15)	0	0	0	0	0	(39,16)	0	0	0	0	0
(40,15)	0	0	0	0	0	(40,16)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1.17)	0	0	0	0	0	(1.18)	0	0	0	0	0
(2.17)	0	0	0	0	0	(2.18)	0	0	0	0	0
(3.17)	0	0	0	0	0	(3.18)	262	263	66	452	9
(4.17)	0	0	0	0	0	(4.18)	0	0	0	0	2
(5.17)	6627	45987	6336	776	1033	(5.18)	3	0	19	132	71
(6.17)	1	172	50	2	5	(6.18)	1232	5502	1058	1597	124
(7.17)	2	0	0	7	0	(7.18)	1182	2	1043	9	5
(8.17)	3	0	23	1	2	(8.18)	33	0	1544	52	121
(9.17)	3939	14605	2764	47	21008	(9.18)	6080	3379	1	2	29
(10.17)	0	0	0	0	0	(10.18)	10	0	0	0	0
(11.17)	0	0	0	0	0	(11.18)	6	0	0	0	0
(12.17)	0	0	0	0	0	(12.18)	0	0	0	0	0
(13.17)	0	0	0	0	0	(13.18)	0	0	0	0	0
(14.17)	0	0	0	0	0	(14.18)	0	0	0	0	0
(15.17)	0	0	0	0	0	(15.18)	1447	0	0	0	0
(16.17)	0	0	0	0	0	(16.18)	0	0	0	0	0
(17.17)	25	100	8	4	13	(17.18)	180	429	450	25	914
(18.17)	0	0	0	0	0	(18.18)	85	2	3	3	700
(19.17)	5719	22974	5945	37	320	(19.18)	227	116	26	2	1395
(20.17)	5395	1798	642	72	193	(20.18)	81	102	349	17	423
(21.17)	0	0	0	0	0	(21.18)	451	46	14	3495	1336
(22.17)	903	942	868	15	716	(22.18)	0	0	0	0	0
(23.17)	0	0	0	0	0	(23.18)	1467	3240	803	170	311
(24.17)	8459	381	91	75	6528	(24.18)	17573	24797	4663	7478	47650
(25.17)	135	0	0	0	313	(25.18)	3473	11866	3723	760	170
(26.17)	0	0	0	0	0	(26.18)	22	176	34	2	2
(27.17)	107	1133	292	14	20	(27.18)	3079	8017	5902	1779	1913
(28.17)	111447	110071	33891	2003	17655	(28.18)	6	0	0	0	0
(29.17)	386	635	783	44	54	(29.18)	585	0	0	0	0
(30.17)	980	645	1629	13	28	(30.18)	8	0	0	0	0
(31.17)	186	0	0	0	0	(31.18)	0	0	0	0	0
(32.17)	0	0	0	0	0	(32.18)	0	0	0	0	0
(33.17)	0	0	0	0	0	(33.18)	0	0	0	0	0
(34.17)	0	0	0	0	0	(34.18)	0	0	0	0	0
(35.17)	0	0	0	0	0	(35.18)	0	0	0	0	0
(36.17)	0	0	0	0	0	(36.18)	0	0	0	0	0
(37.17)	0	0	0	0	0	(37.18)	0	0	0	0	0
(38.17)	0	0	0	0	0	(38.18)	0	0	0	0	0
(39.17)	0	0	0	0	0	(39.18)	0	0	0	0	0
(40.17)	0	0	0	0	0	(40.18)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,19)	0	0	0	0	0	(1,20)	0	0	0	0	0
(2,19)	0	0	0	0	0	(2,20)	0	0	0	0	0
(3,19)	0	0	0	0	0	(3,20)	760	0	19684	328	1091
(4,19)	0	0	0	0	0	(4,20)	0	0	0	0	0
(5,19)	0	0	0	0	0	(5,20)	0	0	0	0	0
(6,19)	128	10	1958	0	0	(6,20)	0	0	0	14	0
(7,19)	1449	166	50	279	845	(7,20)	26	0	163	42	19
(8,19)	27	0	170	343	34	(8,20)	568	0	71	82	52
(9,19)	91	0	10	127	12	(9,20)	85	0	0	0	0
(10,19)	96	1	417	64	2	(10,20)	33	1	26	61	7
(11,19)	248	25	0	0	0	(11,20)	25	0	0	29	1
(12,19)	0	0	0	0	0	(12,20)	0	0	0	0	0
(13,19)	0	0	0	0	0	(13,20)	0	0	0	0	0
(14,19)	0	0	0	0	0	(14,20)	148	0	0	139	0
(15,19)	0	0	0	0	0	(15,20)	27	0	72	5	10
(16,19)	0	0	0	0	0	(16,20)	0	0	0	0	0
(17,19)	0	0	0	0	0	(17,20)	0	0	0	0	0
(18,19)	0	0	0	0	0	(18,20)	0	0	0	0	0
(19,19)	0	0	0	0	0	(19,20)	0	0	0	0	0
(20,19)	35	0	0	7	302	(20,20)	0	0	0	0	0
(21,19)	5114	3604	2497	164	164	(21,20)	16	0	207	4	6
(22,19)	0	0	0	0	0	(22,20)	0	0	0	0	0
(23,19)	456	0	0	0	3837	(23,20)	0	0	0	0	0
(24,19)	1400	0	0	150	733	(24,20)	6737	33775	8024	136	533
(25,19)	2217	31697	8669	0	0	(25,20)	32	116	54	3	4
(26,19)	11	0	0	0	0	(26,20)	30	0	0	0	0
(27,19)	71	0	0	549	0	(27,20)	447	854	798	0	0
(28,19)	2960	1902	2059	188	111	(28,20)	29432	85574	60888	257	138
(29,19)	1710	11857	24729	2765	3637	(29,20)	75	141	187	81681	72045
(30,19)	495	139	133	45	10	(30,20)	0	0	0	35	54
(31,19)	0	0	0	0	0	(31,20)	0	0	0	0	0
(32,19)	0	0	0	0	0	(32,20)	0	0	0	0	0
(33,19)	0	0	0	0	0	(33,20)	0	0	0	0	0
(34,19)	0	0	0	0	0	(34,20)	0	0	0	0	0
(35,19)	0	0	0	0	0	(35,20)	0	0	0	0	0
(36,19)	0	0	0	0	0	(36,20)	0	0	0	0	0
(37,19)	0	0	0	0	0	(37,20)	0	0	0	0	0
(38,19)	0	0	0	0	0	(38,20)	0	0	0	0	0
(39,19)	0	0	0	0	0	(39,20)	0	0	0	0	0
(40,19)	0	0	0	0	0	(40,20)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

POINT SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	KC0
(1,21)	0	0	0	0	0	(1,22)	83	1132	264	24	9
(2,21)	0	0	0	0	0	(2,22)	1	33484	3	0	0
(3,21)	323	667	220	12	2	(3,22)	16544	56	29535	11979	20291
(4,21)	0	0	0	0	0	(4,22)	18	0	45	766	0
(5,21)	0	0	0	0	0	(5,22)	0	0	0	0	0
(6,21)	0	0	0	0	0	(6,22)	7355	1808	709	457	7
(7,21)	2	0	0	0	0	(7,22)	5165	3720	25443	4349	58234
(8,21)	10	0	0	20	0	(8,22)	8480	28715	6503	2843	19291
(9,21)	129	0	0	5	0	(9,22)	3	0	0	0	1
(10,21)	178	9	0	173	0	(10,22)	23	0	0	1	0
(11,21)	1	0	0	0	0	(11,22)	41	0	443	7	15
(12,21)	0	0	0	0	0	(12,22)	8	0	0	35	0
(13,21)	100	0	0	5	0	(13,22)	66	10	14	20	5
(14,21)	0	0	0	0	0	(14,22)	17829	11047	6251	93	223
(15,21)	21	4	2	54	0	(15,22)	470	156	823	233	8
(16,21)	0	0	0	0	0	(16,22)	654	34	631	363	2391
(17,21)	0	0	0	0	0	(17,22)	9	0	0	4	0
(18,21)	0	0	0	0	0	(18,22)	38	0	0	0	0
(19,21)	0	0	0	0	0	(19,22)	0	0	0	0	0
(20,21)	0	0	0	0	0	(20,22)	0	0	0	0	0
(21,21)	1254	0	0	0	0	(21,22)	0	0	0	0	0
(22,21)	6625	14443	6350	35	273	(22,22)	0	0	0	0	0
(23,21)	0	0	0	0	0	(23,22)	0	0	0	0	0
(24,21)	0	0	0	0	0	(24,22)	0	0	0	0	0
(25,21)	0	0	0	0	0	(25,22)	0	0	0	0	0
(26,21)	0	1	0	0	0	(26,22)	112	11	0	0	0
(27,21)	147	1601	3511	32	115	(27,22)	0	0	0	0	0
(28,21)	2675	21985	2259	202	270	(28,22)	4124	1461	1429	2608	90
(29,21)	4716	60756	47822	97343	23171	(29,22)	5713	27036	24236	1044	5829
(30,21)	6036	54368	53746	3339	15584	(30,22)	11444	26722	43343	2302	12012
(31,21)	2334	3491	16080	7003	1618	(31,22)	3032	1557	4025	8514	10273
(32,21)	0	0	0	0	0	(32,22)	50	74	26	54	6
(33,21)	0	0	0	0	0	(33,22)	0	0	0	0	0
(34,21)	0	0	0	0	0	(34,22)	0	0	0	0	0
(35,21)	0	0	0	0	0	(35,22)	0	0	0	0	0
(36,21)	0	0	0	0	0	(36,22)	0	0	0	0	0
(37,21)	0	0	0	0	0	(37,22)	0	0	0	0	0
(38,21)	0	0	0	0	0	(38,22)	0	0	0	0	0
(39,21)	0	0	0	0	0	(39,22)	0	0	0	0	0
(40,21)	0	0	0	0	0	(40,22)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20 KM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO
(1,23)	0	0	0	0	0
(2,23)	0	0	0	0	0
(3,23)	304	6184	1075	4194	18
(4,23)	0	0	0	2163	2035
(5,23)	321	365	298	0	0
(6,23)	2871	2871	4312	1137	956
(7,23)	613	617	444	0	0
(8,23)	330	49	177	89	0
(9,23)	220	256	153	48	37
(10,23)	4	0	0	50	4
(11,23)	187	0	120	174	1
(12,23)	37	0	5	133	0
(13,23)	64	0	62	1	1
(14,23)	27	0	29	242	477
(15,23)	935	0	1082	0	0
(16,23)	128	66	59	30	1
(17,23)	1	0	0	31	23
(18,23)	103	13	227	0	0
(19,23)	207	1	240	1178	423
(20,23)	0	0	0	63	180
(21,23)	0	0	0	124	63
(22,23)	0	0	0	0	0
(23,23)	4	39	0	0	0
(24,23)	1	156	1	0	1
(25,23)	73	34964	53	17	31
(26,23)	3711	0	11079	216	22
(27,23)	43	0	56	233	27
(28,23)	7747	1254	24247	710	398
(29,23)	977	61	2146	126	18
(30,23)	294	72	744	126	22
(31,23)	2474	248	33693	5539	356
(32,23)	361	169	656	1868	2
(33,23)	96	13	57	2151	337
(34,23)	0	0	0	60	24
(35,23)	0	0	0	2	3
(36,23)	0	0	0	0	0
(37,23)	0	0	0	0	0
(38,23)	0	0	0	0	0
(39,23)	0	0	0	0	0
(40,23)	0	0	1	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20 KM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,25)	0	0	0	0	0	(1,26)	0	0	0	0	0
(2,25)	0	0	0	0	0	(2,26)	0	0	0	0	0
(3,25)	1091	1330	2100	53.6	346	(3,26)	0	0	0	0	0
(4,25)	7350	23152	14991	14927	2535	(4,26)	304	517	749	377	114
(5,25)	0	0	0	0	0	(5,26)	0	0	0	0	0
(6,25)	0	0	0	0	0	(6,26)	0	0	0	0	0
(7,25)	0	0	0	0	0	(7,26)	0	0	0	0	0
(8,25)	1	0	0	0	0	(8,26)	138	78	0	0	0
(9,25)	117	0	2	33	5	(9,26)	0	0	0	0	0
(10,25)	117	0	37	147	10	(10,26)	23	14	2	0	0
(11,25)	732	747	116	147	10	(11,26)	7919	26196	32009	16692	2385
(12,25)	7253	20391	28763	9602	1020	(12,26)	369	35	4726	42	0
(13,25)	243	5	64	500	4	(13,26)	65	51	164	12	0
(14,25)	523	150	70	1265	7	(14,26)	471	91	117	7	0
(15,25)	162	135	29	71	29	(15,26)	386	2471	197	0	0
(16,25)	41	0	80	4	6	(16,26)	104	0	0	0	0
(17,25)	14363	30703	19502	244	814	(17,26)	54	2	140	0	0
(18,25)	0	0	11	232	0	(18,26)	14	0	0	0	0
(19,25)	17	7	2	21	0	(19,26)	77	1	16	13	0
(20,25)	238	11	8	100	198	(20,26)	51	172	46	0	0
(21,25)	0	0	1507	20	4	(21,26)	25	0	78	0	0
(22,25)	76	1	50	20	0	(22,26)	64	12	5	0	0
(23,25)	0	0	0	0	0	(23,26)	0	0	0	0	0
(24,25)	13	3	30	19	14	(24,26)	0	0	0	0	0
(25,25)	43	25	82	26	14	(25,26)	214	1427	609	7	0
(26,25)	83	0	29	1360	1096	(26,26)	366	51	2089	356	0
(27,25)	825	21	37351	539	12	(27,26)	389	14	32	21	0
(28,25)	105	3	145	118	3	(28,26)	238	217	210	11	0
(29,25)	32	5	32	135	0	(29,26)	32	175	161	5	0
(30,25)	2	8	6	1353	915	(30,26)	603	2343	2399	60	0
(31,25)	2586	39775	16121	1353	915	(31,26)	411	4814	1083	118	0
(32,25)	0	1	0	325	0	(32,26)	0	0	0	0	0
(33,25)	106	59	82	325	0	(33,26)	0	1	26	1	0
(34,25)	15	0	24	24	0	(34,26)	6	1	1	0	0
(35,25)	1	0	0	0	0	(35,26)	0	0	0	0	0
(36,25)	0	0	0	0	0	(36,26)	0	0	0	0	0
(37,25)	0	0	0	0	0	(37,26)	0	0	0	0	0
(38,25)	0	0	0	0	0	(38,26)	0	0	0	0	0
(39,25)	0	0	0	0	0	(39,26)	0	0	0	0	0
(40,25)	0	0	0	0	0	(40,26)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20NM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,27)	0	0	0	0	0	(1,28)	0	0	0	0	0
(2,27)	0	0	0	0	0	(2,28)	0	0	0	0	0
(3,27)	0	0	0	0	0	(3,28)	0	0	0	0	0
(4,27)	0	0	0	0	0	(4,28)	0	0	0	0	0
(5,27)	0	0	0	0	0	(5,28)	0	0	0	0	0
(6,27)	0	0	0	0	0	(6,28)	0	0	0	0	0
(7,27)	0	0	0	0	0	(7,28)	0	0	0	0	0
(8,27)	0	0	0	0	0	(8,28)	0	0	0	0	0
(9,27)	0	0	0	0	0	(9,28)	0	0	0	0	0
(10,27)	0	0	0	0	0	(10,28)	0	0	0	0	0
(11,27)	0	0	0	0	0	(11,28)	0	0	0	0	0
(12,27)	38	0	55	3	4	(12,28)	0	0	0	0	0
(13,27)	48	4	28	1	2	(13,28)	0	0	0	0	0
(14,27)	15	0	38	2	3	(14,28)	0	0	0	0	0
(15,27)	69	13	40	36	3	(15,28)	902	1673	2577	1128	125
(16,27)	163	1646	28	59	72	(16,28)	6704	31363	7219	2533	2773
(17,27)	193	41	30	19	30	(17,28)	54	1	13	27	1
(18,27)	6	0	0	2	3	(18,28)	107	54	0	26	0
(19,27)	67	0	9	66	1	(19,28)	60	50	32	4	4
(20,27)	0	0	2	0	0	(20,28)	11	0	25	1	2
(21,27)	134	54	363	26	28	(21,28)	11	0	24	4	3
(22,27)	2	0	8	1	1	(22,28)	0	0	2	0	0
(23,27)	6	1	7	1	0	(23,28)	11	0	2	11	1
(24,27)	0	4	1	0	0	(24,28)	3	0	4	0	0
(25,27)	0	0	1	0	0	(25,28)	1	0	10	1	1
(26,27)	3461	4616	145	156	11	(26,28)	2896	28760	1759	14	2
(27,27)	1	0	0	0	0	(27,28)	43	0	33	1795	2
(28,27)	1574	1	153	402	20	(28,28)	4	0	12	12	1
(29,27)	0	0	0	0	0	(29,28)	16	86	192	7	18
(30,27)	193	442	613	139	33	(30,28)	12	16	92	14	39
(31,27)	444	2641	577	1571	36	(31,28)	129	493	285	9	16
(32,27)	127	0	5	425	0	(32,28)	585	14173	7045	358	291
(33,27)	3	0	0	0	0	(33,28)	0	0	0	0	0
(34,27)	0	0	0	0	0	(34,28)	3767	22173	4995	465	528
(35,27)	0	0	0	0	0	(35,28)	0	0	0	0	0
(36,27)	0	0	0	0	0	(36,28)	0	0	0	0	0
(37,27)	0	0	0	0	0	(37,28)	0	0	0	0	0
(38,27)	0	0	0	42	0	(38,28)	0	0	0	0	0
(39,27)	0	0	0	0	0	(39,28)	0	0	0	0	0
(40,27)	0	0	0	0	0	(40,28)	10	179	25	1	2

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,29)	0	0	0	0	0	(1,30)	0	0	0	0	0
(2,29)	0	0	0	0	0	(2,30)	0	0	0	0	0
(3,29)	0	0	0	0	0	(3,30)	0	0	0	0	0
(4,29)	0	0	0	0	0	(4,30)	0	0	0	0	0
(5,29)	0	0	0	0	0	(5,30)	0	0	0	0	0
(6,29)	0	0	0	0	0	(6,30)	0	0	0	0	0
(7,29)	0	0	0	0	0	(7,30)	0	0	0	0	0
(8,29)	0	0	0	0	0	(8,30)	0	0	0	0	0
(9,29)	0	0	0	0	0	(9,30)	0	0	0	0	0
(10,29)	0	0	0	0	0	(10,30)	0	0	0	0	0
(11,29)	0	0	0	0	0	(11,30)	0	0	0	0	0
(12,29)	0	0	0	0	0	(12,30)	0	0	0	0	0
(13,29)	0	0	0	0	0	(13,30)	0	0	0	0	0
(14,29)	1385	5721	49147	1014	1424	(14,30)	32	1	4	10	0
(15,29)	3441	0	396	0	23	(15,30)	0	0	0	0	0
(16,29)	5	0	0	0	0	(16,30)	35	0	7	2	0
(17,29)	34	0	65	57	65	(17,30)	348	1117	565	249	45
(18,29)	461	4	126	212	35	(18,30)	407	10	156	25	15
(19,29)	1955	42	489	224	42	(19,30)	217	15	162	79	38
(20,29)	97	1	4	91	0	(20,30)	12	1	135	11	9
(21,29)	17	14	18	1	2	(21,30)	117	0	92	110	6
(22,29)	1	0	4	0	0	(22,30)	0	0	0	0	0
(23,29)	233	575	132	5	7	(23,30)	24	0	168	13	14
(24,29)	4	0	7	3	0	(24,30)	10503	18653	14034	1260	660
(25,29)	9	0	24	1	2	(25,30)	4	0	6	0	0
(26,29)	65	81	94	254	2124	(26,30)	25	127	26	24	70
(27,29)	180	2355	455	33	59	(27,30)	272	1766	353	100	257
(28,29)	23	1	0	42	120	(28,30)	68	542	94	86	207
(29,29)	3	0	1	6	18	(29,30)	17549	27244	13623	1966	3636
(30,29)	0	0	0	0	0	(30,30)	41	392	191	59	23
(31,29)	954	3873	4012	1235	526	(31,30)	4262	736	393	5839	31
(32,29)	0	0	0	0	0	(32,30)	0	0	0	0	0
(33,29)	54	362	142	7	4	(33,30)	0	0	0	0	0
(34,29)	192	532	821	62	36	(34,30)	128	963	433	666	25
(35,29)	44	289	114	724	0	(35,30)	0	0	0	0	0
(36,29)	0	0	0	0	0	(36,30)	0	0	0	0	0
(37,29)	0	0	0	0	0	(37,30)	0	0	0	0	0
(38,29)	0	0	0	0	0	(38,30)	0	0	0	0	0
(39,29)	0	0	0	0	0	(39,30)	0	0	0	0	0
(40,29)	0	0	0	0	0	(40,30)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

POINT SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID FT	PART	SO2	NOX	HC	CO
(1,31)	0	0	0	0	0	(1,32)	0	0	0	0	0
(2,31)	0	0	0	0	0	(2,32)	0	0	0	0	0
(3,31)	0	0	0	0	0	(3,32)	0	0	0	0	0
(4,31)	0	0	0	0	0	(4,32)	0	0	0	0	0
(5,31)	0	0	0	0	0	(5,32)	0	0	0	0	0
(6,31)	0	0	0	0	0	(6,32)	0	0	0	0	0
(7,31)	0	0	0	0	0	(7,32)	0	0	0	0	0
(8,31)	0	0	0	0	0	(8,32)	0	0	0	0	0
(9,31)	0	0	0	0	0	(9,32)	0	0	0	0	0
(10,31)	0	0	0	0	0	(10,32)	0	0	0	0	0
(11,31)	0	0	0	0	0	(11,32)	0	0	0	0	0
(12,31)	0	0	0	0	0	(12,32)	0	0	0	0	0
(13,31)	0	0	0	0	0	(13,32)	0	0	0	0	0
(14,31)	3	2	1	3	0	(14,32)	10	10	50	3	0
(15,31)	21	0	5	0	0	(15,32)	190	151	95	259	0
(16,31)	0	0	0	0	0	(16,32)	61	0	71	528	5
(17,31)	0	0	0	0	0	(17,32)	174	172	323	16	22
(18,31)	55	170	5	0	0	(18,32)	0	0	0	0	0
(19,31)	6	0	1	0	0	(19,32)	0	0	0	0	0
(20,31)	0	0	0	0	0	(20,32)	0	0	0	0	0
(21,31)	0	0	0	0	0	(21,32)	0	0	0	0	0
(22,31)	130	36	19	39	1	(22,32)	0	0	0	0	0
(23,31)	127	57	17	75	1	(23,32)	293	10	471	821	32
(24,31)	564	178	430	885	33	(24,32)	203	0	164	69	11
(25,31)	858	298	1072	2748	78	(25,32)	67	199	177	933	12
(26,31)	70	0	37	35	37	(26,32)	116	2356	341	501	1305
(27,31)	336	3658	627	230	629	(27,32)	420	2	12	58	164
(28,31)	21	1	0	38	109	(28,32)	31	8	49	325	697
(29,31)	44	474	73	207	102	(29,32)	131	3625	1169	179	513
(30,31)	5351	29777	7222	9738	2831	(30,32)	4807	1650	245	1859	867
(31,31)	157	302	199	222	564	(31,32)	206	1472	797	501	1419
(32,31)	373	53	144	636	1973	(32,32)	3322	1453	634	788	2196
(33,31)	82	53	47	165	413	(33,32)	558	485	206	457	2227
(34,31)	0	0	0	0	0	(34,32)	1347	9618	5982	7294	2371
(35,31)	355	2032	725	3479	1135	(35,32)	1955	91786	30726	6054	1658
(36,31)	184	1070	500	468	33	(36,32)	834	6725	3422	4405	3853
(37,31)	51	3	19	110	273	(37,32)	35	0	0	0	0
(38,31)	1	0	0	2	6	(38,32)	2	2	13	66	187
(39,31)	3	0	0	5	15	(39,32)	0	0	0	0	0
(40,31)	0	0	0	0	0	(40,32)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

POINT SOURCE EMISSIONS

GRID PT	PLRT	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,33)	0	0	0	0	0	(1,34)	0	0	0	0	0
(2,33)	0	0	0	0	0	(2,34)	0	0	0	0	0
(3,33)	0	0	0	0	0	(3,34)	0	0	0	0	0
(4,33)	0	0	0	0	0	(4,34)	0	0	0	0	0
(5,33)	0	0	0	0	0	(5,34)	0	0	0	0	0
(6,33)	0	0	0	0	0	(6,34)	0	0	0	0	0
(7,33)	0	0	0	0	0	(7,34)	0	0	0	0	0
(8,33)	0	0	0	0	0	(8,34)	0	0	0	0	0
(9,33)	0	0	0	0	0	(9,34)	0	0	0	0	0
(10,33)	0	0	0	0	0	(10,34)	0	0	0	0	0
(11,33)	0	0	0	0	0	(11,34)	0	0	0	0	0
(12,33)	0	0	0	0	0	(12,34)	0	0	0	0	0
(13,33)	0	0	0	0	0	(13,34)	0	0	0	0	0
(14,33)	0	0	0	0	0	(14,34)	0	0	0	0	0
(15,33)	277	22	721	13	41	(15,34)	49	0	26	1	2
(16,33)	71205	0	115	8	0	(16,34)	0	0	4	0	0
(17,33)	0	0	0	0	0	(17,34)	0	0	0	0	0
(18,33)	1	0	0	0	0	(18,34)	0	0	0	0	0
(19,33)	0	0	0	0	0	(19,34)	0	0	0	0	0
(20,33)	0	0	0	0	0	(20,34)	1	0	2	0	0
(21,33)	0	0	0	0	0	(21,34)	3	0	0	11	0
(22,33)	0	0	0	0	0	(22,34)	0	0	0	0	0
(23,33)	361	0	759	38	52	(23,34)	0	0	9	0	1
(24,33)	241	32	684	1745	50	(24,34)	542	0	623	98	41
(25,33)	55	0	104	3529	7	(25,34)	1	0	2	0	0
(26,33)	36	3	12	108	0	(26,34)	0	0	0	0	0
(27,33)	0	0	0	0	0	(27,34)	0	0	0	1	0
(28,33)	163	0	0	13	36	(28,34)	47	210	58	317	78
(29,33)	11	471	107	129	355	(29,34)	263	744	201	366	824
(30,33)	241	1	4	26	60	(30,34)	104	56	51	432	519
(31,33)	406	159	135	413	1167	(31,34)	415	2804	983	1328	564
(32,33)	1413	2186	584	215	1626	(32,34)	1356	4511	2376	487	1677
(33,33)	370	1892	588	570	1826	(33,34)	12	25	20	343	350
(34,33)	386	466	540	2546	2430	(34,34)	1327	3773	1615	23428	3396
(35,33)	160	1343	142	2134	352	(35,34)	1403	11358	6403	4493	1220
(36,33)	73	741	142	273	793	(36,34)	13	1	7	183	102
(37,33)	1182	5	27	340	407	(37,34)	34	2	13	63	172
(38,33)	0	31276	8626	221	404	(38,34)	42	0	16	80	0
(39,33)	0	0	0	0	0	(39,34)	0	3	0	0	226
(40,33)	0	0	0	0	0	(40,34)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

POINT SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,359)	0	0	0	0	0	(1,361)	0	0	0	0	0
(2,359)	0	0	0	0	0	(2,361)	0	0	0	0	0
(3,359)	0	0	0	0	0	(3,361)	0	0	0	0	0
(4,359)	0	0	0	0	0	(4,361)	0	0	0	0	0
(5,359)	0	0	0	0	0	(5,361)	0	0	0	0	0
(6,359)	0	0	0	0	0	(6,361)	0	0	0	0	0
(7,359)	0	0	0	0	0	(7,361)	0	0	0	0	0
(8,359)	0	0	0	0	0	(8,361)	0	0	0	0	0
(9,359)	0	0	0	0	0	(9,361)	0	0	0	0	0
(10,359)	0	0	0	0	0	(10,361)	0	0	0	0	0
(11,359)	0	0	0	0	0	(11,361)	0	0	0	0	0
(12,359)	0	0	0	0	0	(12,361)	0	0	0	0	0
(13,359)	0	0	0	0	0	(13,361)	1049	0	0	0	0
(14,359)	0	0	0	1	0	(14,361)	140	0	0	0	0
(15,359)	58	0	0	5	6	(15,361)	38	0	0	0	0
(16,359)	5	1	0	0	33	(16,361)	0	0	0	0	0
(17,359)	150	0	492	25	0	(17,361)	0	0	0	0	0
(18,359)	0	0	0	0	0	(18,361)	0	0	0	0	0
(19,359)	0	0	0	0	0	(19,361)	58	0	0	0	0
(20,359)	0	0	0	0	0	(20,361)	57	0	0	0	0
(21,359)	11	0	0	0	0	(21,361)	0	0	0	0	0
(22,359)	4	4	0	0	0	(22,361)	19	0	0	0	0
(23,359)	0	0	1	0	0	(23,361)	919	0	0	0	0
(24,359)	39	0	125	6	0	(24,361)	5	0	0	0	0
(25,359)	160	0	0	75	71	(25,361)	364	0	0	0	0
(26,359)	0	0	0	0	0	(26,361)	13	0	0	0	0
(27,359)	32	0	0	0	0	(27,361)	105	0	0	0	0
(28,359)	64	18	19	57	154	(28,361)	0	0	0	0	0
(29,359)	81	96	45	537	136	(29,361)	0	0	0	0	0
(30,359)	52	1	9	45	127	(30,361)	73	0	0	0	0
(31,359)	133	93	59	214	492	(31,361)	240	0	0	0	0
(32,359)	223	659	213	422	492	(32,361)	919	0	0	0	0
(33,359)	1452	1864	779	3245	1685	(33,361)	857	0	0	0	0
(34,359)	2121	19102	13942	5514	2214	(34,361)	311	0	0	0	0
(35,359)	3543	26830	27062	2186	3244	(35,361)	634	0	0	0	0
(36,359)	0	0	0	0	0	(36,361)	0	0	0	0	0
(37,359)	0	0	0	0	0	(37,361)	0	0	0	0	0
(38,359)	76	5	23	142	403	(38,361)	0	0	0	0	0
(39,359)	77	5	29	145	410	(39,361)	0	0	0	0	0
(40,359)	0	0	0	0	0	(40,361)	0	0	0	0	0

ANNUAL EMISSION RATES (TONE/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

POINT SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	HC0
(1,37)	0	0	0	0	0	(1,38)	0	0	0	0	0
(2,37)	0	0	0	0	0	(2,38)	0	0	0	0	0
(3,37)	0	0	0	0	0	(3,38)	0	0	0	0	0
(4,37)	0	0	0	0	0	(4,38)	0	0	0	0	0
(5,37)	0	0	0	0	0	(5,38)	0	0	0	0	0
(6,37)	0	0	0	0	0	(6,38)	0	0	0	0	0
(7,37)	0	0	0	0	0	(7,38)	0	0	0	0	0
(8,37)	0	0	0	0	0	(8,38)	0	0	0	0	0
(9,37)	0	0	0	0	0	(9,38)	0	0	0	0	0
(10,37)	0	0	0	0	0	(10,38)	0	0	0	0	0
(11,37)	0	0	0	0	0	(11,38)	0	0	0	0	0
(12,37)	0	0	0	0	0	(12,38)	0	0	0	0	0
(13,37)	0	0	0	0	0	(13,38)	0	0	0	0	0
(14,37)	0	0	0	0	0	(14,38)	14	0	0	0	0
(15,37)	43	0	0	0	0	(15,38)	1173	402	355	54	24
(16,37)	157	0	156	31	59	(16,38)	100	0	0	2	0
(17,37)	0	0	0	0	0	(17,38)	1	0	0	0	0
(18,37)	0	0	0	0	0	(18,38)	0	0	0	0	0
(19,37)	27	0	53	3	4	(19,38)	0	0	0	0	0
(20,37)	18	0	0	0	0	(20,38)	0	0	0	0	0
(21,37)	0	0	0	0	0	(21,38)	3	0	5	0	0
(22,37)	1	28	3	4	1	(22,38)	65	53	102	94	59
(23,37)	7	6	12	0	0	(23,38)	0	0	0	0	0
(24,37)	0	0	0	0	0	(24,38)	151	8	45	160	0
(25,37)	0	0	0	0	0	(25,38)	0	0	0	0	0
(26,37)	1	7	3	4	0	(26,38)	103	246	06	107	1
(27,37)	51	6	16	259	96	(27,38)	21	1	8	19	0
(28,37)	20	130	40	70	212	(28,38)	15	95	21	16	0
(29,37)	63	693	190	303	0	(29,38)	132	142	73	5894	0
(30,37)	593	49579	27367	534	0	(30,38)	21	46	16	34	0
(31,37)	57	87	37	39	0	(31,38)	236	15	83	443	0
(32,37)	143	50	44	473	0	(32,38)	765	3901	7773	3563	277
(33,37)	144	29	67	728	618	(33,38)	75	40	34	136	0
(34,37)	0	0	0	1591	0	(34,38)	0	0	0	0	0
(35,37)	0	0	0	0	0	(35,38)	0	0	0	0	0
(36,37)	0	0	0	0	0	(36,38)	0	0	0	0	0
(37,37)	0	0	0	0	0	(37,38)	0	0	0	0	0
(38,37)	0	0	0	0	0	(38,38)	0	0	0	0	0
(39,37)	0	0	0	0	0	(39,38)	0	0	0	0	0
(40,37)	0	0	0	0	0	(40,38)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

POINT SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,39)	0	0	0	0	0	(1,40)	0	0	0	0	0
(2,39)	0	0	0	0	0	(2,40)	0	0	0	0	0
(3,39)	0	0	0	0	0	(3,40)	0	0	0	0	0
(4,39)	0	0	0	0	0	(4,40)	0	0	0	0	0
(5,39)	0	0	0	0	0	(5,40)	0	0	0	0	0
(6,39)	0	0	0	0	0	(6,40)	0	0	0	0	0
(7,39)	0	0	0	0	0	(7,40)	0	0	0	0	0
(8,39)	0	0	0	0	0	(8,40)	0	0	0	0	0
(9,39)	0	0	0	0	0	(9,40)	0	0	0	0	0
(10,39)	0	0	0	0	0	(10,40)	0	0	0	0	0
(11,39)	0	0	0	0	0	(11,40)	0	0	0	0	0
(12,39)	0	0	0	0	0	(12,40)	0	0	0	0	0
(13,39)	0	0	0	0	0	(13,40)	0	0	0	0	0
(14,39)	0	0	0	0	0	(14,40)	0	0	0	0	0
(15,39)	33	0	0	0	0	(15,40)	15	3	39	2	3
(16,39)	3132	494	91	5	6	(16,40)	4082	72	667	128	44
(17,39)	8	0	20	1	2	(17,40)	10	2	20	3	1
(18,39)	5	0	20	1	1	(18,40)	20	55	75	106	6
(19,39)	0	0	0	0	0	(19,40)	0	0	0	0	0
(20,39)	72	1040	188	456	13	(20,40)	7	14	67	5	15
(21,39)	5	0	14	1	1	(21,40)	14	0	0	2	0
(22,39)	147	9	197	1453	8	(22,40)	205	2	10	48	0
(23,39)	0	0	0	16	0	(23,40)	158	6	42	8	0
(24,39)	0	0	0	0	0	(24,40)	10	1	14	19	0
(25,39)	1	0	0	0	0	(25,40)	36	2	14	68	0
(26,39)	0	0	0	0	0	(26,40)	0	0	0	16	0
(27,39)	0	0	0	0	0	(27,40)	8	1	3	3	0
(28,39)	31	2	12	58	0	(28,40)	49	496	92	518	106
(29,39)	64	396	90	358	0	(29,40)	727	394	77	158	359
(30,39)	113	189	54	0	0	(30,40)	0	0	0	0	0
(31,39)	0	0	0	0	0	(31,40)	0	0	0	0	0
(32,39)	127	592	136	379	60	(32,40)	0	0	0	0	0
(33,39)	317	989	282	662	1056	(33,40)	0	0	0	0	0
(34,39)	1	0	0	0	0	(34,40)	0	0	0	0	0
(35,39)	0	0	0	0	0	(35,40)	0	0	0	0	0
(36,39)	0	0	0	0	0	(36,40)	0	0	0	0	0
(37,39)	0	0	0	0	0	(37,40)	0	0	0	0	0
(38,39)	0	0	0	0	0	(38,40)	0	0	0	0	0
(39,39)	0	0	0	0	0	(39,40)	0	0	0	0	0
(40,39)	0	0	0	0	0	(40,40)	0	0	0	0	0

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SECTION E-2
GRIDDED AREA SOURCE EMISSION (TONS/YEAR) ON THE 20-KM GRID NETWORK

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1, 1)	4347	2587	4570	6531	33575	(1, 2)	778	694	1221	1807	6912
(2, 1)	1436	1359	1888	2726	13292	(2, 2)	357	317	702	1030	5046
(3, 1)	1573	1161	2706	3525	19152	(3, 2)	1265	1070	1977	2811	14342
(4, 1)	348	275	482	632	3037	(4, 2)	386	338	418	572	2707
(5, 1)	1254	999	1720	1711	8106	(5, 2)	725	596	1035	1106	5219
(6, 1)	1681	1401	6180	6710	33332	(6, 2)	558	446	772	775	3670
(7, 1)	56	41	428	381	1603	(7, 2)	371	292	831	759	3357
(8, 1)	47	33	333	313	1336	(8, 2)	38	27	261	246	1058
(9, 1)	53	37	347	330	1563	(9, 2)	70	53	440	465	1222
(10, 1)	131	167	843	839	4383	(10, 2)	188	553	2430	2657	13101
(11, 1)	150	207	811	546	4464	(11, 2)	37	63	203	228	1088
(12, 1)	42	65	219	255	1197	(12, 2)	103	205	471	544	2487
(13, 1)	56	127	318	347	1613	(13, 2)	191	368	920	1005	4683
(14, 1)	0	0	0	0	0	(14, 2)	24	46	116	127	591
(15, 1)	59	29	103	211	837	(15, 2)	38	18	113	137	542
(16, 1)	0	0	0	0	0	(16, 2)	29	14	88	101	403
(17, 1)	134	203	677	837	3906	(17, 2)	74	111	371	459	2142
(18, 1)	162	547	1822	2254	10516	(18, 2)	140	497	1677	2078	9652
(19, 1)	145	202	695	880	3974	(19, 2)	113	126	563	713	3392
(20, 1)	440	513	2302	3666	14703	(20, 2)	91	92	350	470	1871
(21, 1)	146	143	635	844	3335	(21, 2)	48	59	212	275	1219
(22, 1)	103	78	388	510	2100	(22, 2)	54	65	249	329	1501
(23, 1)	46	31	161	211	833	(23, 2)	54	178	445	595	2842
(24, 1)	16	16	66	95	334	(24, 2)	76	74	309	446	1569
(25, 1)	75	72	302	433	1634	(25, 2)	29	38	160	231	811
(26, 1)	33	31	130	183	826	(26, 2)	65	88	304	490	1817
(27, 1)	38	39	159	228	985	(27, 2)	55	90	249	368	1483
(28, 1)	83	99	382	545	2351	(28, 2)	137	207	712	1014	4295
(29, 1)	68	64	389	547	2468	(29, 2)	53	59	274	400	1675
(30, 1)	33	36	210	314	1356	(30, 2)	8	8	45	67	290
(31, 1)	6	9	32	68	257	(31, 2)	88	123	452	547	3575
(32, 1)	33	46	168	353	1332	(32, 2)	19	27	97	204	771
(33, 1)	0	0	0	0	0	(33, 2)	0	0	0	0	0
(34, 1)	0	0	0	0	0	(34, 2)	0	0	0	0	0
(35, 1)	0	0	0	0	0	(35, 2)	0	0	0	0	0
(36, 1)	0	0	0	0	0	(36, 2)	0	0	0	0	0
(37, 1)	0	0	0	0	0	(37, 2)	0	0	0	0	0
(38, 1)	0	0	0	0	0	(38, 2)	0	0	0	0	0
(39, 1)	0	0	0	0	0	(39, 2)	0	0	0	0	0
(40, 1)	0	0	0	0	0	(40, 2)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20NM)

AREA 4 SOURCE EMISSIONS

GRID PT	PART	SQZ	NOX	HC	CO	GRID PT	PART	SQZ	NOX	HC	CO
(1, 3)	2671	3333	5327	6071	30945	(1, 4)	663	919	1255	1775	9038
(2, 3)	31628	17828	36757	71182	257870	(2, 4)	289	289	460	664	3336
(3, 3)	1990	1607	2952	4295	21315	(3, 4)	168	189	277	397	2005
(4, 3)	34	33	68	105	502	(4, 4)	1098	1208	1696	2407	11647
(5, 3)	177	219	920	844	3901	(5, 4)	151	159	239	345	1672
(6, 3)	594	563	878	732	3331	(6, 4)	409	479	673	744	3543
(7, 3)	576	523	1365	1249	5981	(7, 4)	414	440	763	751	3530
(8, 3)	76	74	510	526	2463	(8, 4)	30	31	211	212	1012
(9, 3)	33	36	216	237	1443	(9, 4)	42	41	275	311	1518
(10, 3)	192	257	1210	1333	6551	(10, 4)	284	204	1894	2166	10665
(11, 3)	190	270	1062	1234	5318	(11, 4)	266	196	1765	2017	9926
(12, 3)	33	63	153	178	818	(12, 4)	135	280	540	632	2816
(13, 3)	65	125	357	322	1383	(13, 4)	61	139	262	309	1406
(14, 3)	31	61	173	157	671	(14, 4)	31	43	170	133	891
(15, 3)	44	61	219	231	991	(15, 4)	26	82	132	139	597
(16, 3)	32	41	141	144	610	(16, 4)	68	22	278	240	1164
(17, 3)	65	71	254	298	1750	(17, 4)	30	41	614	777	3282
(18, 3)	46	63	550	696	2940	(18, 4)	41	76	185	228	1157
(19, 3)	95	107	476	602	2867	(19, 4)	66	50	244	336	1338
(20, 3)	55	58	227	302	1308	(20, 4)	1062	187	843	900	5018
(21, 3)	135	188	662	845	3959	(21, 4)	47	54	253	341	1515
(22, 3)	20	24	107	137	614	(22, 4)	179	193	1127	1614	7160
(23, 3)	411	685	2058	2777	12563	(23, 4)	6	7	36	52	209
(24, 3)	125	147	683	945	3825	(24, 4)	143	129	703	1034	4280
(25, 3)	78	86	360	523	1956	(25, 4)	98	52	275	478	1743
(26, 3)	103	103	357	518	2114	(26, 4)	111	75	366	593	2276
(27, 3)	134	214	577	853	3494	(27, 4)	64	31	171	304	1089
(28, 3)	46	53	232	369	1533	(28, 4)	15	18	82	133	532
(29, 3)	80	101	403	618	2585	(29, 4)	0	0	0	0	0
(30, 3)	0	0	0	0	0	(30, 4)	38	46	209	340	1359
(31, 3)	64	77	351	571	2286	(31, 4)	7	8	34	61	244
(32, 3)	51	62	276	467	1851	(32, 4)	0	0	0	0	0
(33, 3)	0	0	0	0	0	(33, 4)	0	0	0	0	0
(34, 3)	0	0	0	0	0	(34, 4)	0	0	0	0	0
(35, 3)	0	0	0	0	0	(35, 4)	0	0	0	0	0
(36, 3)	0	0	0	0	0	(36, 4)	0	0	0	0	0
(37, 3)	0	0	0	0	0	(37, 4)	0	0	0	0	0
(38, 3)	0	0	0	0	0	(38, 4)	0	0	0	0	0
(39, 3)	0	0	0	0	0	(39, 4)	0	0	0	0	0
(40, 3)	0	0	0	0	0	(40, 4)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

APEA SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1, 5)	967	1350	1005	2524	12972	(1, 6)	156	224	393	565	2893
(2, 5)	590	1046	1194	1678	8784	(2, 6)	255	366	640	921	4716
(3, 5)	435	736	841	1197	6196	(3, 6)	693	747	901	1329	6709
(4, 5)	62	66	85	123	607	(4, 6)	1328	1354	1506	2356	11834
(5, 5)	179	220	325	471	2257	(5, 6)	123	149	279	458	2130
(6, 5)	605	836	1102	1457	7694	(6, 6)	706	810	1229	1756	8345
(7, 5)	1000	1315	3373	3598	17224	(7, 6)	1596	1918	4535	5445	27086
(8, 5)	56	66	434	339	1864	(8, 6)	66	107	403	520	2706
(9, 5)	42	63	280	369	1758	(9, 6)	115	177	747	985	4716
(10, 5)	72	92	463	596	2867	(10, 6)	168	271	1053	1332	6779
(11, 5)	365	394	2203	2765	13524	(11, 6)	508	1061	2501	3416	17060
(12, 5)	114	238	454	531	2363	(12, 6)	53	110	245	324	1584
(13, 5)	77	132	402	483	2273	(13, 6)	42	66	240	300	1490
(14, 5)	59	87	352	438	2113	(14, 6)	40	56	251	306	1487
(15, 5)	31	56	148	214	945	(15, 6)	194	295	1065	1479	7224
(16, 5)	52	50	214	214	892	(16, 6)	92	96	384	406	1693
(17, 5)	36	39	150	151	625	(17, 6)	30	79	123	125	510
(18, 5)	70	99	358	454	1949	(18, 6)	101	191	536	688	3322
(19, 5)	180	335	862	1069	5316	(19, 6)	508	916	2717	3483	16520
(20, 5)	52	60	285	370	1615	(20, 6)	99	190	493	724	3024
(21, 5)	90	105	499	653	2879	(21, 6)	113	115	578	883	3688
(22, 5)	331	444	2150	3178	15670	(22, 6)	499	831	2983	4840	22570
(23, 5)	424	574	2750	4078	20081	(23, 6)	3943	833	25953	40148	205573
(24, 5)	360	219	1550	2366	10119	(24, 6)	2453	3751	14064	22581	110940
(25, 5)	185	108	781	1193	5047	(25, 6)	155	192	718	1144	5634
(26, 5)	235	115	639	1139	4114	(26, 6)	83	40	344	599	2497
(27, 5)	528	258	1445	2573	9317	(27, 6)	15	12	65	118	510
(28, 5)	23	11	61	109	350	(28, 6)	19	17	80	147	639
(29, 5)	37	30	118	237	981	(29, 6)	39	33	172	270	1254
(30, 5)	142	115	453	509	3765	(30, 6)	82	67	270	525	2204
(31, 5)	32	110	501	813	3256	(31, 6)	34	31	146	223	1012
(32, 5)	56	67	307	438	1995	(32, 6)	57	67	306	496	1997
(33, 5)	0	0	0	0	0	(33, 6)	0	0	0	0	0
(34, 5)	0	0	0	0	0	(34, 6)	0	0	0	0	0
(35, 5)	0	0	0	0	0	(35, 6)	0	0	0	0	0
(36, 5)	0	0	0	0	0	(36, 6)	0	0	0	0	0
(37, 5)	0	0	0	0	0	(37, 6)	0	0	0	0	0
(38, 5)	0	0	0	0	0	(38, 6)	0	0	0	0	0
(39, 5)	0	0	0	0	0	(39, 6)	0	0	0	0	0
(40, 5)	0	0	0	0	0	(40, 6)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

AREA SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	HC
(1, 7)	1563	1759	2109	2380	15233	(1, 8)	1282	1366	1977	2837	18373
(2, 7)	363	1077	1317	1868	9580	(2, 8)	9145	9273	1264	15982	77507
(3, 7)	1907	1940	2249	3351	16773	(3, 8)	14134	14174	15418	23380	14557
(4, 7)	237	285	450	676	3397	(4, 8)	1018	1117	1763	2253	11076
(5, 7)	240	339	684	1073	5222	(5, 8)	134	198	982	597	2971
(6, 7)	833	714	1018	1273	6111	(6, 8)	1282	1413	4009	3159	15137
(7, 7)	3288	3052	5068	6138	29829	(7, 8)	783	875	2852	2325	11824
(8, 7)	184	312	1055	1406	7393	(8, 8)	406	734	2206	2937	15975
(9, 7)	648	1096	3709	4946	25998	(9, 8)	3141	5851	15647	20803	117365
(10, 7)	915	1675	4907	6579	38376	(10, 8)	1420	2657	7404	9844	54609
(11, 7)	690	1449	3375	4613	23064	(11, 8)	586	936	2584	3447	18429
(12, 7)	66	139	324	443	2216	(12, 8)	77	151	385	519	2695
(13, 7)	37	64	162	206	1157	(13, 8)	280	487	1221	1554	8726
(14, 7)	116	198	518	655	3636	(14, 8)	71	123	303	393	2206
(15, 7)	532	624	3377	4719	24255	(15, 8)	59	100	295	381	1672
(16, 7)	73	26	148	208	1073	(16, 8)	14	24	70	91	395
(17, 7)	43	48	203	239	1048	(17, 8)	144	123	567	795	3655
(18, 7)	30	44	163	183	901	(18, 8)	78	92	374	450	2159
(19, 7)	213	292	1210	1321	6161	(19, 8)	441	496	2064	2522	12059
(20, 7)	120	136	634	819	3544	(20, 8)	315	263	1393	2049	10078
(21, 7)	171	167	875	1358	6060	(21, 8)	367	390	2116	3026	14929
(22, 7)	264	304	1655	2700	14070	(22, 8)	354	272	1763	2893	15878
(23, 7)	7047	15423	37708	54074	282965	(23, 8)	654	601	4024	6433	34523
(24, 7)	6011	11898	28969	38913	153372	(24, 8)	1319	1182	6945	11243	57223
(25, 7)	308	253	5850	2489	11911	(25, 8)	948	1070	4947	7519	36180
(26, 7)	135	115	645	1046	4691	(26, 8)	56	44	256	410	1811
(27, 7)	37	39	192	318	1462	(27, 8)	173	214	1045	1625	7648
(28, 7)	280	243	1158	2122	9505	(28, 8)	148	132	710	1077	4955
(29, 7)	47	40	200	332	1523	(29, 8)	601	376	1498	2476	11691
(30, 7)	607	516	2737	3919	18832	(30, 8)	473	228	976	1681	8028
(31, 7)	101	90	414	643	2912	(31, 8)	225	150	644	1091	5057
(32, 7)	45	41	193	285	1274	(32, 8)	176	160	720	1123	5012
(33, 7)	0	0	0	0	0	(33, 8)	0	0	0	0	0
(34, 7)	0	0	0	0	0	(34, 8)	0	0	0	0	0
(35, 7)	0	0	0	0	0	(35, 8)	0	0	0	0	0
(36, 7)	0	0	0	0	0	(36, 8)	0	0	0	0	0
(37, 7)	0	0	0	0	0	(37, 8)	0	0	0	0	0
(38, 7)	0	0	0	0	0	(38, 8)	0	0	0	0	0
(39, 7)	0	0	0	0	0	(39, 8)	0	0	0	0	0
(40, 7)	0	0	0	0	0	(40, 8)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20 KM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1, 9)	2583	2369	4279	6505	31586	(1, 10)	12313	11386	11012	21702	83232
(2, 9)	21847	19527	19190	34185	145324	(2, 10)	6413	6152	7068	12230	53409
(3, 9)	1925	1895	2280	3575	17027	(3, 10)	1453	1479	2439	3959	18350
(4, 9)	2945	2617	3480	4664	22644	(4, 10)	688	398	592	933	4403
(5, 9)	1236	1356	4963	2841	13341	(5, 10)	6380	3917	7428	9095	43126
(6, 9)	1033	1162	4267	2504	11833	(6, 10)	1136	932	2678	2321	11254
(7, 9)	1256	3118	5053	4945	76466	(7, 10)	926	2433	3994	4560	24552
(8, 9)	1545	3811	6098	8349	46507	(8, 10)	334	612	1853	2311	12023
(9, 9)	6839	13245	34970	46487	233368	(9, 10)	765	1405	4038	5314	29228
(10, 9)	1930	3452	9376	12457	69506	(10, 10)	624	1114	3388	4446	23243
(11, 9)	1019	1827	5242	6957	37704	(11, 10)	150	275	801	1037	5273
(12, 9)	120	322	524	1226	6446	(12, 10)	147	271	781	1012	5168
(13, 9)	200	348	874	1113	6744	(13, 10)	1077	1763	5014	6356	35496
(14, 9)	121	209	532	678	3730	(14, 10)	315	529	1432	1821	10022
(15, 9)	131	222	659	852	3700	(15, 10)	100	182	542	701	3044
(16, 9)	108	183	545	705	3060	(16, 10)	86	142	433	559	2444
(17, 9)	44	48	212	275	1303	(17, 10)	70	77	339	440	2087
(18, 9)	124	131	511	714	3556	(18, 10)	159	242	843	1072	5977
(19, 9)	1467	931	4610	7440	34877	(19, 10)	501	714	2490	3168	16479
(20, 9)	112	93	493	741	3569	(20, 10)	257	273	1197	1659	8180
(21, 9)	201	213	1153	1645	8102	(21, 10)	224	190	1234	1468	6881
(22, 9)	191	151	1046	1255	5913	(22, 10)	453	359	2455	2855	13173
(23, 9)	1294	1439	7386	10479	53284	(23, 10)	548	840	3160	4816	25040
(24, 9)	6197	14953	33277	46230	229653	(24, 10)	3559	7776	19805	28522	145439
(25, 9)	933	1132	5108	7813	39035	(25, 10)	412	494	2360	3508	18102
(26, 9)	110	60	498	641	3709	(26, 10)	161	129	803	1326	6092
(27, 9)	106	82	485	753	3337	(27, 10)	87	56	356	571	2466
(28, 9)	106	78	456	540	2954	(28, 10)	257	173	602	1062	4721
(29, 9)	362	169	724	1269	6007	(29, 10)	695	324	1478	2643	12008
(30, 9)	475	222	935	1632	7799	(30, 10)	286	133	563	982	4693
(31, 9)	294	137	578	1009	4824	(31, 10)	287	134	565	987	4716
(32, 9)	33	21	91	154	72	(32, 10)	0	0	0	0	0
(33, 9)	0	0	0	0	0	(33, 10)	0	0	0	0	0
(34, 9)	0	0	0	0	0	(34, 10)	0	0	0	0	0
(35, 9)	0	0	0	0	0	(35, 10)	0	0	0	0	0
(36, 9)	0	0	0	0	0	(36, 10)	0	0	0	0	0
(37, 9)	0	0	0	0	0	(37, 10)	0	0	0	0	0
(38, 9)	0	0	0	0	0	(38, 10)	0	0	0	0	0
(39, 9)	0	0	0	0	0	(39, 10)	0	0	0	0	0
(40, 9)	0	0	0	0	0	(40, 10)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,11)	75209	66121	62333	125579	471810	(1,12)	12369	11722	11322	22114	91174
(2,11)	1794	1639	2316	1803	16046	(2,12)	1224	1274	2252	3254	14896
(3,11)	676	654	1175	1359	8585	(3,12)	694	676	1045	1503	6925
(4,11)	7836	5176	6369	9826	46131	(4,12)	1105	730	898	1386	6507
(5,11)	17401	10014	14350	22116	105100	(5,12)	1153	1117	2660	3536	17718
(6,11)	841	1289	3478	4379	22856	(6,12)	1390	250	1027	1267	6573
(7,11)	207	392	1109	1384	7255	(7,12)	233	370	1277	1585	8156
(8,11)	550	879	3244	4118	21291	(8,12)	47	76	278	354	1820
(9,11)	153	251	315	1167	5858	(9,12)	138	223	874	1084	5276
(10,11)	325	560	1944	7544	12127	(10,12)	80	134	498	628	2992
(11,11)	194	357	1088	1306	6081	(11,12)	82	149	472	597	2873
(12,11)	351	663	1916	2435	11786	(12,12)	109	207	588	746	3611
(13,11)	257	421	1208	1531	8934	(13,12)	234	397	1093	1381	7613
(14,11)	283	461	1314	1688	9356	(14,12)	343	619	1495	2003	11561
(15,11)	346	633	1496	2022	11630	(15,12)	726	1333	3125	4230	24543
(16,11)	91	171	403	497	2850	(16,12)	211	417	875	1044	5563
(17,11)	70	139	292	348	1956	(17,12)	137	250	567	695	3652
(18,11)	65	121	421	535	2784	(18,12)	33	50	174	220	1176
(19,11)	272	417	1388	1793	9131	(19,12)	103	174	543	716	4116
(20,11)	277	418	1683	2009	10077	(20,12)	212	359	1105	1424	8000
(21,11)	484	790	2596	3164	16610	(21,12)	298	505	1404	1835	9888
(22,11)	214	294	1079	1306	6710	(22,12)	1390	2391	6725	8354	45567
(23,11)	111	159	620	916	4828	(23,12)	156	269	757	940	5129
(24,11)	353	497	1360	2592	12839	(24,12)	57	82	282	363	1303
(25,11)	565	51	3173	4174	20298	(25,12)	478	433	2509	3325	15639
(26,11)	53	51	306	511	2326	(26,12)	285	242	1224	1674	7670
(27,11)	80	51	289	515	2324	(27,12)	64	40	144	217	1017
(28,11)	1819	650	3140	5682	25167	(28,12)	83	89	300	317	1276
(29,11)	406	188	898	1025	7195	(29,12)	91	91	305	322	1297
(30,11)	0	0	0	0	0	(30,12)	74	74	248	263	1058
(31,11)	220	297	1886	1305	4502	(31,12)	339	457	2901	2008	6925
(32,11)	0	0	0	0	0	(32,12)	0	0	0	0	0
(33,11)	0	0	0	0	0	(33,12)	0	0	0	0	0
(34,11)	0	0	0	0	0	(34,12)	0	0	0	0	0
(35,11)	0	0	0	0	0	(35,12)	0	0	0	0	0
(36,11)	0	0	0	0	0	(36,12)	0	0	0	0	0
(37,11)	0	0	0	0	0	(37,12)	0	0	0	0	0
(38,11)	0	0	0	0	0	(38,12)	0	0	0	0	0
(39,11)	0	0	0	0	0	(39,12)	0	0	0	0	0
(40,11)	0	0	0	0	0	(40,12)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

AREA SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,13)	916	1015	1154	1833	8948	(1,14)	0	0	0	0	0
(2,13)	2551	2816	2845	4611	21777	(2,14)	369	410	483	731	3511
(3,13)	523	590	707	1025	4963	(3,14)	2279	2571	3085	4471	21640
(4,13)	260	294	353	511	2473	(4,14)	235	281	426	596	2858
(5,13)	288	330	1110	1907	7107	(5,14)	117	207	667	864	4056
(6,13)	100	139	548	631	3475	(6,14)	383	676	2178	2820	13238
(7,13)	212	380	1234	1507	7963	(7,14)	123	232	725	940	4686
(8,13)	70	131	416	536	2670	(8,14)	168	316	983	1282	6398
(9,13)	172	266	1153	1388	6587	(9,14)	49	80	333	390	1826
(10,13)	95	150	614	734	3511	(10,14)	38	65	235	269	1255
(11,13)	132	223	783	896	4377	(11,14)	145	245	861	986	4814
(12,13)	89	160	510	595	2900	(12,14)	263	595	1250	1522	7383
(13,13)	77	180	345	428	2072	(13,14)	288	674	1295	1504	7767
(14,13)	129	297	582	722	3526	(14,14)	218	570	967	1221	6021
(15,13)	216	404	928	1222	6983	(15,14)	65	120	317	387	2202
(16,13)	63	125	262	313	1669	(16,14)	548	1015	2656	3242	18429
(17,13)	133	227	527	654	3611	(17,14)	482	753	1751	2172	11999
(18,13)	40	59	200	245	1191	(18,14)	137	219	634	789	3957
(19,13)	103	151	553	680	3900	(19,14)	152	273	805	960	4646
(20,13)	870	1492	4906	5965	38037	(20,14)	253	446	1179	1851	8153
(21,13)	1482	2679	6359	8623	47538	(21,14)	1047	2037	4283	5880	32259
(22,13)	447	777	2069	2660	14874	(22,14)	109	587	1327	1675	9320
(23,13)	1280	2238	5758	7570	41117	(23,14)	1053	1853	4742	6256	33973
(24,13)	180	316	808	1006	5787	(24,14)	400	699	1806	2379	12916
(25,13)	219	347	1159	1482	7978	(25,14)	556	865	3014	3623	20676
(26,13)	4369	2520	8402	12995	61850	(26,14)	1197	1730	4165	5666	29683
(27,13)	1659	1659	6654	8562	38764	(27,14)	5331	3863	13095	18876	94375
(28,13)	272	264	1230	1180	4737	(28,14)	582	613	3209	3702	17138
(29,13)	1555	1558	5284	5565	22407	(29,14)	764	819	3475	3874	17018
(30,13)	140	149	563	551	2179	(30,14)	113	194	699	807	3513
(31,13)	274	374	2319	1638	5727	(31,14)	655	1064	3897	4425	13148
(32,13)	0	0	0	0	0	(32,14)	601	901	3528	4077	17736
(33,13)	0	0	0	0	0	(33,14)	0	0	0	0	0
(34,13)	0	0	0	0	0	(34,14)	0	0	0	0	0
(35,13)	0	0	0	0	0	(35,14)	0	0	0	0	0
(36,13)	0	0	0	0	0	(36,14)	0	0	0	0	0
(37,13)	0	0	0	0	0	(37,14)	0	0	0	0	0
(38,13)	0	0	0	0	0	(38,14)	0	0	0	0	0
(39,13)	0	0	0	0	0	(39,14)	0	0	0	0	0
(40,13)	0	0	0	0	0	(40,14)	0	0	0	0	0

UNIFORM EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1.15)	0	0	0	0	0	(1.16)	0	0	0	0	0
(2.15)	0	0	0	0	0	(2.16)	0	0	0	0	0
(3.15)	632	713	855	1239	5997	(3.16)	92	350	437	503	2689
(4.15)	206	548	679	816	4277	(4.16)	1257	4701	5967	6862	36591
(5.15)	145	475	725	865	4441	(5.16)	145	553	690	793	4243
(6.15)	89	157	507	656	3001	(6.16)	159	513	803	936	4832
(7.15)	155	274	880	1140	5357	(7.16)	66	1741	406	462	2226
(8.15)	27	53	177	205	954	(8.16)	18	27	111	126	606
(9.15)	25	59	153	192	776	(9.16)	50	80	307	349	1677
(10.15)	24	55	177	178	735	(10.16)	114	224	593	635	3259
(11.15)	123	242	698	764	3854	(11.16)	206	406	1077	1153	5915
(12.15)	106	216	543	595	3021	(12.16)	12	19	59	60	295
(13.15)	0	0	0	0	0	(13.16)	14	21	71	68	334
(14.15)	43	100	192	238	1152	(14.16)	13	23	59	69	390
(15.15)	57	106	279	340	1937	(15.16)	275	464	1187	1377	7673
(16.15)	226	421	1107	1353	7699	(16.16)	105	179	460	537	2996
(17.15)	55	101	261	320	1813	(17.16)	105	202	522	583	3231
(18.15)	75	129	352	417	2157	(18.16)	554	1011	2412	2939	15884
(19.15)	100	165	483	575	2922	(19.16)	391	738	1487	2004	11138
(20.15)	203	391	919	1144	6253	(20.16)	171	283	740	1000	5966
(21.15)	85	163	354	466	2591	(21.16)	255	475	1104	1490	8330
(22.15)	961	1908	4029	4911	27843	(22.16)	266	471	1106	1464	8242
(23.15)	546	988	2325	3023	16447	(23.16)	1744	3691	7224	9554	53213
(24.15)	751	1329	3144	4157	23301	(24.16)	932	1644	4189	5315	30275
(25.15)	351	552	1472	2380	12901	(25.16)	1942	3470	8397	10529	61329
(26.15)	1200	1800	6363	8174	44795	(26.16)	8062	13659	37718	50732	293746
(27.15)	10266	16842	49116	67811	395197	(27.16)	5468	9094	30587	40608	223073
(28.15)	5330	7867	25961	34269	120986	(28.16)	401	543	2982	3698	18396
(29.15)	378	535	1081	1139	12714	(29.16)	73	86	470	583	2901
(30.15)	176	283	495	583	2413	(30.16)	46	59	290	343	1322
(31.15)	81	117	147	183	757	(31.16)	40	58	247	292	1125
(32.15)	25	39	0	0	0	(32.16)	0	0	0	0	0
(33.15)	0	0	0	0	0	(33.16)	0	0	0	0	0
(34.15)	0	0	0	0	0	(34.16)	0	0	0	0	0
(35.15)	0	0	0	0	0	(35.16)	0	0	0	0	0
(36.15)	0	0	0	0	0	(36.16)	0	0	0	0	0
(37.15)	0	0	0	0	0	(37.16)	0	0	0	0	0
(38.15)	0	0	0	0	0	(38.16)	0	0	0	0	0
(39.15)	0	0	0	0	0	(39.16)	0	0	0	0	0
(40.15)	0	0	0	0	0	(40.16)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

ARCA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1.17)	0	0	0	0	0	(1.18)	0	0	0	0	0
(2.17)	0	0	0	0	0	(2.19)	0	0	0	0	0
(3.17)	0	0	0	0	0	(3.18)	0	0	0	0	0
(4.17)	0	0	0	0	0	(4.18)	0	0	0	0	0
(5.17)	731	2782	3473	3954	21354	(5.18)	73	134	390	593	3396
(6.17)	110	301	530	645	3454	(6.18)	68	125	363	551	2563
(7.17)	51	92	275	409	2187	(7.19)	559	1074	2912	4516	24340
(8.17)	77	124	450	562	2819	(8.18)	36	61	201	292	1562
(9.17)	289	433	1777	2022	9733	(9.19)	280	365	1712	2068	9996
(10.17)	20	28	122	147	707	(10.18)	95	132	583	701	3381
(11.17)	17	23	103	123	595	(11.18)	79	103	496	593	2834
(12.17)	9	12	52	63	302	(12.18)	43	38	299	348	1603
(13.17)	103	146	519	499	2405	(13.18)	4	3	26	31	142
(14.17)	6	9	30	35	182	(14.18)	2	4	7	9	51
(15.17)	62	104	266	307	1706	(15.18)	14	26	53	68	319
(16.17)	40	67	170	196	1091	(16.18)	111	210	428	546	3037
(17.17)	257	466	1825	1261	7015	(17.18)	1015	1919	3908	4976	27704
(18.17)	70	133	308	369	2049	(18.18)	228	422	895	1126	6229
(19.17)	485	909	2070	2533	14135	(19.18)	558	1071	2167	2513	14180
(20.17)	442	770	1846	2131	11945	(20.18)	253	402	1045	1276	7176
(21.17)	571	1037	2276	2937	16728	(21.18)	657	1175	2863	3905	21789
(22.17)	127	1937	3773	5101	28936	(22.18)	656	1394	2049	2916	16233
(23.17)	870	219	535	712	3999	(23.18)	796	1373	3188	4133	23831
(24.17)	395	691	1637	2161	12087	(24.18)	2245	3719	9414	12266	70114
(25.17)	1115	2030	4685	5945	33965	(25.18)	196	372	975	1115	5713
(26.17)	667	1433	2983	3614	21317	(26.18)	256	384	1367	1492	6742
(27.17)	1043	2383	4727	5766	33524	(27.18)	2468	2331	6280	8634	42175
(28.17)	5160	7524	17164	22141	117403	(28.18)	962	944	2816	3851	19209
(29.17)	753	886	4767	5904	29014	(29.18)	832	975	4601	5906	26351
(30.17)	122	154	764	906	3596	(30.18)	1001	1234	5961	7261	29675
(31.17)	472	601	2949	3479	13423	(31.18)	58	132	284	452	2117
(32.17)	129	268	638	1001	4655	(32.18)	0	0	0	0	0
(33.17)	0	0	0	0	0	(33.18)	0	0	0	0	0
(34.17)	0	0	0	0	0	(34.18)	0	0	0	0	0
(35.17)	0	0	0	0	0	(35.18)	0	0	0	0	0
(36.17)	0	0	0	0	0	(36.18)	0	0	0	0	0
(37.17)	0	0	0	0	0	(37.18)	0	0	0	0	0
(38.17)	0	0	0	0	0	(38.18)	0	0	0	0	0
(39.17)	0	0	0	0	0	(39.18)	0	0	0	0	0
(40.17)	0	0	0	0	0	(40.18)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

AREA SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,19)	0	0	0	0	0	(1,20)	0	0	0	0	0
(2,19)	0	0	0	0	0	(2,20)	0	0	0	0	0
(3,19)	30	93	158	224	987	(3,20)	0	0	0	0	0
(4,19)	5	13	27	41	168	(4,20)	0	0	0	0	0
(5,19)	0	0	0	0	0	(5,20)	0	0	0	0	0
(6,19)	26	48	139	211	1140	(6,20)	0	0	0	0	0
(7,19)	336	616	1786	2715	14630	(7,20)	123	256	659	1002	5016
(8,19)	39	67	217	318	1702	(8,20)	132	288	731	1084	5084
(9,19)	54	88	302	433	2310	(9,20)	50	82	282	404	2155
(10,19)	111	181	623	894	4770	(10,20)	44	73	250	358	1914
(11,19)	332	532	1890	2866	18293	(11,20)	90	169	554	818	4524
(12,19)	60	64	394	508	2573	(12,20)	129	137	824	1217	6800
(13,19)	13	17	131	152	701	(13,20)	61	70	392	546	2364
(14,19)	23	25	193	225	1036	(14,20)	63	87	410	499	2594
(15,19)	29	34	197	236	1192	(15,20)	61	71	413	494	2494
(16,19)	35	41	238	284	1435	(16,20)	125	146	841	1007	5082
(17,19)	20	35	83	104	563	(17,20)	82	123	464	580	2916
(18,19)	25	46	96	122	671	(18,20)	23	39	110	142	700
(19,19)	44	81	180	232	1218	(19,20)	43	74	191	249	1221
(20,19)	43	78	181	232	1297	(20,20)	33	58	151	201	1059
(21,19)	318	549	1415	1916	10685	(21,20)	590	1021	2684	3574	19791
(22,19)	234	405	1037	1405	7836	(22,20)	1330	2297	5916	8012	44691
(23,19)	97	209	293	419	2332	(23,20)	46	63	212	287	1453
(24,19)	216	366	904	1335	6867	(24,20)	114	202	597	778	3777
(25,19)	1370	2057	6166	7861	43822	(25,20)	378	616	1912	2537	12306
(26,19)	516	638	2657	245	13847	(26,20)	399	545	2090	2702	12826
(27,19)	428	547	2204	2553	11413	(27,20)	496	751	2719	3833	19155
(28,19)	2166	2709	9696	13273	68680	(28,20)	3281	5146	15273	20961	111272
(29,19)	3092	4091	15051	19171	108338	(29,20)	6248	11480	28983	39552	214586
(30,19)	1513	1640	7369	10326	51653	(30,20)	1181	1610	5668	8048	40297
(31,19)	1744	1891	8494	11303	59543	(31,20)	70	108	339	501	2438
(32,19)	63	152	330	529	2475	(32,20)	0	0	0	0	0
(33,19)	0	0	0	0	0	(33,20)	0	0	0	0	0
(34,19)	0	0	0	0	0	(34,20)	0	0	0	0	0
(35,19)	0	0	0	0	0	(35,20)	0	0	0	0	0
(36,19)	0	0	0	0	0	(36,20)	0	0	0	0	0
(37,19)	0	0	0	0	0	(37,20)	0	0	0	0	0
(38,19)	0	0	0	0	0	(38,20)	0	0	0	0	0
(39,19)	0	0	0	0	0	(39,20)	0	0	0	0	0
(40,19)	0	0	0	0	0	(40,20)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

AREA SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,21)	0	0	0	0	0	(1,22)	0	0	0	0	0
(2,21)	0	0	0	0	0	(2,22)	1436	4554	12062	9031	63822
(3,21)	0	0	0	0	0	(3,22)	58	205	240	137	825
(4,21)	0	0	0	0	0	(4,22)	14	13	108	232	1172
(5,21)	0	0	0	0	0	(5,22)	205	1066	1052	1037	6387
(6,21)	47	233	167	160	595	(6,22)	3353	9022	18453	28071	115469
(7,21)	75	203	413	630	2587	(7,22)	2700	7291	14812	22610	92840
(8,21)	459	1235	2510	3831	15730	(8,22)	99	742	584	857	3858
(9,21)	125	335	689	1050	4343	(9,22)	57	73	381	570	3440
(10,21)	62	88	368	570	3270	(10,22)	83	109	539	613	4870
(11,21)	65	69	417	616	3440	(11,22)	50	83	301	435	2550
(12,21)	28	30	182	269	1500	(12,22)	234	556	1318	1769	10856
(13,21)	125	274	720	382	5931	(13,22)	183	434	1029	1381	8880
(14,21)	43	102	243	326	2000	(14,22)	261	615	1470	1988	12115
(15,21)	108	211	653	839	4814	(15,22)	760	1852	4194	6725	35050
(16,21)	53	96	356	446	2398	(16,22)	119	189	654	912	4731
(17,21)	96	156	507	648	3238	(17,22)	156	244	842	1120	5778
(18,21)	143	233	755	916	4825	(18,22)	49	80	259	330	1642
(19,21)	47	77	250	319	1595	(19,22)	67	106	363	432	2079
(20,21)	63	124	375	430	2193	(20,22)	99	166	504	634	3354
(21,21)	205	365	1016	1345	6652	(21,22)	378	640	1579	2237	12794
(22,21)	1824	3110	7503	10662	61940	(22,22)	124	203	631	951	4496
(23,21)	80	135	375	544	2820	(23,22)	17	72	134	230	951
(24,21)	54	89	308	445	2043	(24,22)	32	51	225	330	1385
(25,21)	30	51	160	137	932	(25,22)	159	313	996	1105	4782
(26,21)	213	409	1315	1452	6346	(26,22)	290	562	1628	2198	11684
(27,21)	1229	2144	7211	10024	151951	(27,22)	4017	7539	20626	28533	153944
(28,21)	3535	7445	17918	24174	126073	(28,22)	21253	41188	84582	120168	496469
(29,21)	18976	39560	75583	92638	436617	(29,22)	21223	35568	80592	118709	463180
(30,21)	23644	41670	84917	143333	497216	(30,22)	8366	9702	39720	80566	364808
(31,21)	1556	2160	6853	12404	59433	(31,22)	0	0	0	0	0
(32,21)	0	0	0	0	0	(32,22)	0	0	0	0	0
(33,21)	0	0	0	0	0	(33,22)	0	0	0	0	0
(34,21)	0	0	0	0	0	(34,22)	0	0	0	0	0
(35,21)	0	0	0	0	0	(35,22)	0	0	0	0	0
(36,21)	0	0	0	0	0	(36,22)	0	0	0	0	0
(37,21)	0	0	0	0	0	(37,22)	0	0	0	0	0
(38,21)	0	0	0	0	0	(38,22)	0	0	0	0	0
(39,21)	0	0	0	0	0	(39,22)	0	0	0	0	0
(40,21)	0	0	0	0	0	(40,22)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

AIR SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID FT	PART	SO2	NOX	HC	CO
(1,23)	0	0	0	0	0	(1,24)	0	0	0	0	0
(2,23)	0	0	0	0	0	(2,24)	0	0	0	0	0
(3,23)	361	2260	1232	31	110	(3,24)	440	878	2332	4128	17076
(4,23)	0	0	0	0	0	(4,24)	340	1050	1815	1732	10823
(5,23)	273	667	2602	3560	27614	(5,24)	124	342	563	804	4029
(6,23)	13966	4401	13527	20330	226523	(6,24)	303	835	1388	1964	9848
(7,23)	2927	5522	10307	15280	67994	(7,24)	370	897	1857	2780	14591
(8,23)	801	2166	4371	6658	27503	(8,24)	289	673	1714	2351	13450
(9,23)	228	494	1371	1973	10717	(9,24)	130	303	773	1061	6072
(10,23)	104	177	665	963	5708	(10,24)	189	295	1133	1775	10213
(11,23)	162	222	1039	1578	9459	(11,24)	125	194	785	1217	7039
(12,23)	159	247	987	1549	9112	(12,24)	114	139	742	1196	7612
(13,23)	899	204	599	5218	5218	(13,24)	130	164	836	1353	7760
(14,23)	91	212	511	690	4200	(14,24)	54	78	336	537	2567
(15,23)	105	185	598	517	4752	(15,24)	247	323	1498	2353	12557
(16,23)	98	173	554	874	4501	(16,24)	237	305	1443	2267	12121
(17,23)	73	109	427	622	3722	(17,24)	60	109	470	740	4353
(18,23)	174	217	1050	1624	9340	(18,24)	1109	1844	5983	9331	51890
(19,23)	425	668	2304	3803	20187	(19,24)	182	302	902	1629	8463
(20,23)	144	227	788	945	4583	(20,24)	95	148	518	694	3497
(21,23)	56	88	308	360	1731	(21,24)	28	37	151	233	1279
(22,23)	74	120	378	510	2455	(22,24)	83	119	526	790	4180
(23,23)	117	195	576	857	4117	(23,24)	83	115	569	857	4617
(24,23)	33	42	24231	376	1742	(24,24)	52	115	835	1258	6702
(25,23)	162	264	985	1531	8520	(25,24)	135	169	2684	4294	24170
(26,23)	105	183	607	971	5471	(26,24)	485	840	2798	4498	25397
(27,23)	205	359	1182	1882	10591	(27,24)	780	1040	4241	6513	33888
(28,23)	1391	1554	7850	12173	59275	(28,24)	869	1042	4556	6744	34603
(29,23)	3081	3673	15999	24311	123815	(29,24)	2023	3276	10147	16477	78040
(30,23)	2229	2785	11354	18235	89748	(30,24)	102	145	509	899	4114
(31,23)	2283	2484	11075	22571	96911	(31,24)	1010	143	4990	10208	44112
(32,23)	3190	3499	16744	34256	148012	(32,24)	541	558	2671	5464	23614
(33,23)	0	0	0	0	0	(33,24)	0	0	0	0	0
(34,23)	0	0	0	0	0	(34,24)	0	0	0	0	0
(35,23)	0	0	0	0	0	(35,24)	0	0	0	0	0
(36,23)	0	0	0	0	0	(36,24)	0	0	0	0	0
(37,23)	0	0	0	0	0	(37,24)	0	0	0	0	0
(38,23)	0	0	0	0	0	(38,24)	0	0	0	0	0
(39,23)	0	0	0	0	0	(39,24)	0	0	0	0	0
(40,23)	0	0	0	0	0	(40,24)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

AREA SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,25)	0	0	0	0	0	(1,26)	0	0	0	0	0
(2,25)	0	0	0	0	0	(2,26)	0	0	0	0	0
(3,25)	1837	4302	11528	16922	91860	(3,26)	0	0	0	0	0
(4,25)	6094	18675	31557	33522	227367	(4,26)	424	760	3204	4037	26534
(5,25)	0	0	0	0	0	(5,26)	0	0	0	0	0
(6,25)	0	0	0	0	0	(6,26)	0	0	0	0	0
(7,25)	166	457	759	1075	5308	(7,26)	0	0	0	0	0
(8,25)	118	238	652	1035	5637	(8,26)	0	0	0	0	0
(9,25)	200	297	1242	2083	11759	(9,26)	20	79	123	207	1358
(10,25)	303	681	1538	2641	12571	(10,26)	160	351	780	1375	6410
(11,25)	1330	4372	9728	17145	79933	(11,26)	2563	5631	12528	22081	102944
(12,25)	410	755	2266	4018	20234	(12,26)	267	516	1453	2305	11744
(13,25)	383	569	2402	3965	21582	(13,26)	330	551	1988	2892	15935
(14,25)	203	327	1248	1073	10270	(14,26)	67	111	404	595	3276
(15,25)	21	30	131	224	1210	(15,26)	405	567	2476	4214	22782
(16,25)	71	94	432	702	3771	(16,26)	64	114	361	588	3091
(17,25)	856	404	1004	2307	12826	(17,26)	141	237	798	1240	7003
(18,25)	42	71	235	372	2094	(18,26)	24	41	133	199	1120
(19,25)	130	237	720	1059	5848	(19,26)	74	142	414	561	3053
(20,25)	116	217	646	916	4930	(20,26)	194	367	1089	1484	8091
(21,25)	31	42	177	231	1564	(21,26)	114	140	553	1018	5792
(22,25)	42	51	241	370	2158	(22,26)	100	130	619	984	5496
(23,25)	42	52	252	384	2093	(23,26)	21	25	119	186	1061
(24,25)	121	150	744	1120	6037	(24,26)	7	9	38	59	325
(25,25)	191	267	1109	1712	9035	(25,26)	39	58	222	347	1810
(26,25)	153	235	866	1365	7272	(26,26)	342	504	1924	3011	15714
(27,25)	919	1351	4668	7477	40837	(27,26)	1002	1552	5736	9084	46392
(28,25)	348	496	2029	3218	16317	(28,26)	227	363	1302	2064	10518
(29,25)	739	989	4078	6501	32099	(29,26)	366	579	1887	2866	13665
(30,25)	616	989	3086	5041	23729	(30,26)	366	590	1882	3050	14792
(31,25)	2835	4549	14343	23331	111567	(31,26)	2693	4103	14547	23792	120090
(32,25)	10	11	50	103	444	(32,26)	1114	1686	6059	9916	50329
(33,25)	73	76	362	740	3197	(33,26)	0	0	0	0	0
(34,25)	214	221	1058	2165	9355	(34,26)	166	171	820	1678	7252
(35,25)	0	0	0	0	0	(35,26)	0	0	0	0	0
(36,25)	0	0	0	0	0	(36,26)	0	0	0	0	0
(37,25)	0	0	0	0	0	(37,26)	0	0	0	0	0
(38,25)	0	0	0	0	0	(38,26)	0	0	0	0	0
(39,25)	0	0	0	0	0	(39,26)	0	0	0	0	0
(40,25)	0	0	0	0	0	(40,26)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.727)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.3.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.4.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.5.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.6.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.7.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.8.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.9.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.10.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.11.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.12.27)	42	72	255	369	2034	(1.28)	0	0	0	0	0
(1.13.27)	184	309	1102	1533	8789	(1.28)	11	16	63	92	505
(1.14.27)	91	145	549	836	4580	(1.28)	78	134	438	744	3788
(1.15.27)	210	418	1147	1023	9393	(1.28)	326	717	1665	2642	12858
(1.16.27)	1157	2168	5780	8624	42393	(1.28)	1928	4607	9630	14378	70669
(1.17.27)	104	249	520	776	3815	(1.28)	417	788	2241	3829	18336
(1.18.27)	52	74	304	464	2660	(1.28)	104	132	681	948	5465
(1.19.27)	51	84	290	416	2332	(1.28)	122	177	668	1056	5908
(1.20.27)	86	144	408	633	3828	(1.28)	38	55	210	319	1765
(1.21.27)	286	380	1643	2484	13973	(1.28)	87	116	501	757	4260
(1.22.27)	41	50	235	369	2102	(1.28)	66	85	308	584	3375
(1.23.27)	51	61	250	455	2594	(1.28)	18	22	108	166	972
(1.24.27)	28	38	164	251	1360	(1.28)	35	54	215	316	1606
(1.25.27)	104	155	594	922	4793	(1.28)	87	140	522	771	3890
(1.26.27)	573	852	3231	5070	26330	(1.28)	259	380	1532	2241	11712
(1.27.27)	124	210	635	1103	5548	(1.28)	101	143	577	841	4524
(1.28.27)	157	246	989	1387	7013	(1.28)	92	149	481	668	3170
(1.29.27)	89	145	452	603	2793	(1.28)	329	533	1666	2221	10290
(1.30.27)	1388	2131	7450	11775	50951	(1.28)	713	1108	3531	5453	25337
(1.31.27)	1646	2495	8852	14471	72070	(1.28)	2321	3549	11516	18330	85421
(1.32.27)	313	467	1777	2814	14112	(1.28)	590	805	3429	5053	24445
(1.33.27)	402	552	2339	3486	17058	(1.28)	120	187	647	966	4486
(1.34.27)	26	35	131	227	1007	(1.28)	840	1361	4360	6558	29308
(1.35.27)	21	22	106	216	934	(1.28)	80	120	393	613	2779
(1.36.27)	0	0	0	0	0	(1.28)	8	29	29	51	229
(1.37.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.38.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.39.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(1.40.27)	0	0	0	0	0	(1.28)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,29)	0	0	0	0	0	(1,30)	0	0	0	0	0
(2,29)	0	0	0	0	0	(2,30)	0	0	0	0	0
(3,29)	0	0	0	0	0	(3,30)	0	0	0	0	0
(4,29)	0	0	0	0	0	(4,30)	0	0	0	0	0
(5,29)	0	0	0	0	0	(5,30)	0	0	0	0	0
(6,29)	0	0	0	0	0	(6,30)	0	0	0	0	0
(7,29)	0	0	0	0	0	(7,30)	0	0	0	0	0
(8,29)	0	0	0	0	0	(8,30)	0	0	0	0	0
(9,29)	0	0	0	0	0	(9,30)	0	0	0	0	0
(10,29)	0	0	0	0	0	(10,30)	0	0	0	0	0
(11,29)	0	0	0	0	0	(11,30)	0	0	0	0	0
(12,29)	0	0	0	0	0	(12,30)	0	0	0	0	0
(13,29)	0	0	0	0	0	(13,30)	0	0	0	0	0
(14,29)	343	685	1833	3113	15015	(14,30)	115	225	603	1023	4936
(15,29)	190	373	997	1634	8169	(15,30)	10	19	52	88	825
(16,29)	85	167	446	758	3653	(16,30)	107	214	495	788	3434
(17,29)	83	168	416	660	3873	(17,30)	621	1247	2882	4588	22896
(18,29)	387	675	1958	3107	16492	(18,30)	432	862	2019	3220	16146
(19,29)	1031	2188	5068	8070	40307	(19,30)	295	531	1510	2467	13056
(20,29)	174	309	896	1457	7742	(20,30)	143	264	744	1179	6380
(21,29)	33	58	206	321	1763	(21,30)	103	190	535	813	4473
(22,29)	94	116	606	878	5500	(22,30)	76	132	413	646	3605
(23,29)	155	191	1003	1453	9128	(23,30)	271	691	1463	1855	8824
(24,29)	30	67	177	226	1207	(24,30)	198	5074	10608	12895	61082
(25,29)	66	181	406	536	3028	(25,30)	159	284	913	1391	7535
(26,29)	351	496	2023	2319	15651	(26,30)	587	1108	2531	4121	18729
(27,29)	101	166	590	600	4082	(27,30)	61	128	292	461	2066
(28,29)	145	295	694	1033	3287	(28,30)	10	71	43	70	305
(29,29)	102	168	516	711	3287	(29,30)	2586	5654	11203	18350	77915
(30,29)	263	407	1301	2041	9405	(30,30)	1277	2461	6001	9620	42774
(31,29)	2433	3713	12067	19221	89475	(31,30)	302	361	1893	2737	13187
(32,29)	335	446	1310	2037	13714	(32,30)	179	271	959	1223	5892
(33,29)	310	476	1652	2234	10650	(33,30)	213	336	1104	1428	6899
(34,29)	391	633	2028	3051	13312	(34,30)	151	179	554	948	4393
(35,29)	495	542	1860	3210	14416	(35,30)	785	942	3252	5835	26888
(36,29)	60	59	203	372	1664	(36,30)	0	0	0	0	0
(37,29)	0	0	0	0	0	(37,30)	0	0	0	0	0
(38,29)	0	0	0	0	0	(38,30)	0	0	0	0	0
(39,29)	0	0	0	0	0	(39,30)	0	0	0	0	0
(40,29)	0	0	0	0	0	(40,30)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

AREA SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,31)	0	0	0	0	0	(1,32)	0	0	0	0	0
(2,31)	0	0	0	0	0	(2,32)	0	0	0	0	0
(3,31)	0	0	0	0	0	(3,32)	0	0	0	0	0
(4,31)	0	0	0	0	0	(4,32)	0	0	0	0	0
(5,31)	0	0	0	0	0	(5,32)	0	0	0	0	0
(6,31)	0	0	0	0	0	(6,32)	0	0	0	0	0
(7,31)	0	0	0	0	0	(7,32)	0	0	0	0	0
(8,31)	0	0	0	0	0	(8,32)	0	0	0	0	0
(9,31)	0	0	0	0	0	(9,32)	0	0	0	0	0
(10,31)	0	0	0	0	0	(10,32)	0	0	0	0	0
(11,31)	0	0	0	0	0	(11,32)	0	0	0	0	0
(12,31)	0	0	0	0	0	(12,32)	0	0	0	0	0
(13,31)	0	0	0	0	0	(13,32)	0	0	0	0	0
(14,31)	0	0	0	0	0	(14,32)	0	0	0	0	0
(15,31)	104	178	559	1028	5039	(15,32)	99	168	530	976	4794
(16,31)	14	30	71	105	521	(16,32)	390	667	2090	3837	18618
(17,31)	19	41	93	134	675	(17,32)	68	144	325	457	2239
(18,31)	63	126	291	464	2315	(18,32)	29	62	140	192	968
(19,31)	20	40	93	140	700	(19,32)	3	6	14	22	111
(20,31)	16	29	83	135	714	(20,32)	0	0	0	0	0
(21,31)	8	14	45	77	414	(21,32)	1	2	7	34	118
(22,31)	347	588	1885	3211	17250	(22,32)	41	67	223	116	406
(23,31)	376	715	1960	3046	16549	(23,32)	90	155	494	430	2149
(24,31)	1405	2704	7092	11582	59365	(24,32)	380	630	2109	3315	17030
(25,31)	1596	3606	8578	11844	60001	(25,32)	159	280	862	1352	7112
(26,31)	650	837	3129	6126	28532	(26,32)	190	266	958	1392	6966
(27,31)	573	1176	2743	4315	19471	(27,32)	504	1001	2416	3759	15944
(28,31)	72	153	336	515	2369	(28,32)	46	110	205	315	1336
(29,31)	270	502	953	1561	6617	(29,32)	356	849	1557	2389	10053
(30,31)	2268	5161	9405	16059	68063	(30,32)	355	901	1709	2792	11828
(31,31)	693	1577	2996	4907	20797	(31,32)	83	212	389	598	2513
(32,31)	266	623	1165	1781	7534	(32,32)	592	1412	2590	3973	15724
(33,31)	332	575	1686	2207	10336	(33,32)	837	1993	3657	5611	21617
(34,31)	285	557	1183	1744	8185	(34,32)	1208	2457	5071	7555	34814
(35,31)	3439	7363	15997	23921	116723	(35,32)	3801	7695	15461	25418	116964
(36,31)	1061	1710	5011	8736	41799	(36,32)	1083	2119	5448	9662	38819
(37,31)	72	131	362	644	2250	(37,32)	1407	2978	7520	13352	40963
(38,31)	0	0	0	0	0	(38,32)	146	348	681	1015	4157
(39,31)	0	0	0	0	0	(39,32)	38	85	164	259	1050
(40,31)	0	0	0	0	0	(40,32)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 40KM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,33)	0	0	0	0	0	(1,34)	0	0	0	0	0
(2,33)	0	0	0	0	0	(2,34)	0	0	0	0	0
(3,33)	0	0	0	0	0	(3,34)	0	0	0	0	0
(4,33)	0	0	0	0	0	(4,34)	0	0	0	0	0
(5,33)	0	0	0	0	0	(5,34)	0	0	0	0	0
(6,33)	0	0	0	0	0	(6,34)	0	0	0	0	0
(7,33)	0	0	0	0	0	(7,34)	0	0	0	0	0
(8,33)	0	0	0	0	0	(8,34)	0	0	0	0	0
(9,33)	0	0	0	0	0	(9,34)	0	0	0	0	0
(10,33)	0	0	0	0	0	(10,34)	0	0	0	0	0
(11,33)	0	0	0	0	0	(11,34)	0	0	0	0	0
(12,33)	0	0	0	0	0	(12,34)	0	0	0	0	0
(13,33)	56	95	301	554	2716	(13,34)	33	67	211	389	1903
(14,33)	54	91	268	530	2000	(14,34)	42	85	210	343	1693
(15,33)	122	227	631	1059	5236	(15,34)	12	30	56	86	420
(16,33)	134	264	678	1063	5282	(16,34)	3	7	12	19	94
(17,33)	11	24	56	76	385	(17,34)	12	22	61	100	531
(18,33)	3	6	17	28	148	(18,34)	5	5	23	102	354
(19,33)	3	4	19	85	293	(19,34)	4	12	53	239	835
(20,33)	9	11	51	230	894	(20,34)	9	12	53	239	835
(21,33)	3	10	45	206	721	(21,34)	0	0	0	0	0
(22,33)	5	8	26	41	211	(22,34)	12	26	56	90	421
(23,33)	89	160	476	750	3772	(23,34)	13	39	95	144	724
(24,33)	242	426	1330	2040	10596	(24,34)	163	365	975	1423	7519
(25,33)	33	185	580	726	3857	(25,34)	43	76	225	322	1667
(26,33)	160	167	793	1000	4863	(26,34)	89	89	443	594	2710
(27,33)	62	58	313	426	1948	(27,34)	277	258	1422	1937	8856
(28,33)	16	39	71	109	460	(28,34)	9	18	39	51	230
(29,33)	164	389	717	1097	4624	(29,34)	154	306	675	876	3950
(30,33)	86	205	375	576	2424	(30,34)	52	108	230	308	1389
(31,33)	110	261	473	734	3091	(31,34)	592	2921	5470	8452	45759
(32,33)	1517	3614	6630	10173	42816	(32,34)	1236	107	196	301	1267
(33,33)	1370	3246	6038	9326	39326	(33,34)	4252	9462	20479	33120	144843
(34,33)	1809	4249	8965	14340	62602	(34,34)	6691	14876	32278	52389	229012
(35,33)	2926	6414	14172	23209	101347	(35,34)	1425	7129	12521	12521	54229
(36,33)	962	1883	4835	8573	37090	(36,34)	281	551	1415	2510	10860
(37,33)	161	314	907	1432	6194	(37,34)	15	23	75	132	573
(38,33)	163	386	717	1140	4672	(38,34)	62	147	263	426	1742
(39,33)	357	850	1558	2463	10074	(39,34)	151	261	661	1046	4277
(40,33)	0	0	0	0	0	(40,34)	0	0	0	0	0

ANNUAL EMISSION RATES (TONE/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20NM)

AREA SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,35)	0	0	0	0	0	(1,36)	0	0	0	0	0
(2,35)	0	0	0	0	0	(2,36)	0	0	0	0	0
(3,35)	0	0	0	0	0	(3,36)	0	0	0	0	0
(4,35)	0	0	0	0	0	(4,36)	0	0	0	0	0
(5,35)	0	0	0	0	0	(5,36)	0	0	0	0	0
(6,35)	0	0	0	0	0	(6,36)	0	0	0	0	0
(7,35)	0	0	0	0	0	(7,36)	0	0	0	0	0
(8,35)	0	0	0	0	0	(8,36)	0	0	0	0	0
(9,35)	0	0	0	0	0	(9,36)	0	0	0	0	0
(10,35)	0	0	0	0	0	(10,36)	0	0	0	0	0
(11,35)	0	0	0	0	0	(11,36)	0	0	0	0	0
(12,35)	0	0	0	0	0	(12,36)	0	0	0	0	0
(13,35)	0	0	0	0	0	(13,36)	0	0	0	0	0
(14,35)	43	111	201	314	1512	(14,36)	210	545	986	1536	7497
(15,35)	107	278	502	783	3020	(15,36)	149	387	700	1030	5323
(16,35)	39	101	182	283	1363	(16,36)	55	143	258	402	1954
(17,35)	28	73	132	206	1003	(17,36)	2	5	9	14	70
(18,35)	2	6	12	18	88	(18,36)	11	14	54	100	476
(19,35)	6	8	37	165	573	(19,36)	70	89	341	631	2996
(20,35)	14	20	78	234	936	(20,36)	11	17	60	115	554
(21,35)	0	0	0	0	0	(21,36)	2	4	13	26	124
(22,35)	0	0	0	0	0	(22,36)	15	25	88	169	820
(23,35)	53	55	237	318	1458	(23,36)	155	206	768	1256	5330
(24,35)	122	182	598	838	4169	(24,36)	292	275	1276	1700	7611
(25,35)	37	63	134	201	1434	(25,36)	62	53	302	420	1896
(26,35)	59	52	307	424	1934	(26,36)	191	152	376	1383	6275
(27,35)	102	95	525	716	3276	(27,36)	23	18	110	167	759
(28,35)	20	40	47	114	512	(28,36)	0	0	0	0	0
(29,35)	377	748	1688	2140	9650	(29,36)	11	22	48	63	283
(30,35)	135	242	568	775	3407	(30,36)	56	152	380	556	2391
(31,35)	101	153	401	587	2493	(31,36)	383	583	1522	2232	9471
(32,35)	369	561	1466	2150	9125	(32,36)	650	1012	2591	3773	16084
(33,35)	1	2	5	7	29	(33,36)	290	595	1305	1989	8726
(34,35)	7467	16016	35963	50160	254352	(34,36)	1096	2449	5279	8537	37337
(35,35)	3679	8153	17744	28792	125868	(35,36)	2375	5383	10711	17464	77135
(36,35)	205	418	1012	1741	7558	(36,36)	0	0	0	0	0
(37,35)	23	45	117	208	900	(37,36)	0	0	0	0	0
(38,35)	33	80	146	231	945	(38,36)	0	0	0	0	0
(39,35)	43	102	187	296	1210	(39,36)	0	0	0	0	0
(40,35)	35	83	152	241	985	(40,36)	0	0	0	0	0

ANNUAL EMISSION RATES (T/MC/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20 MP)

AREA 4 SOURCE EMISSIONS

GRID PT	FAHRT	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,37)	0	0	0	0	0	(1,38)	0	0	0	0	0
(2,37)	0	0	0	0	0	(2,38)	0	0	0	0	0
(3,37)	0	0	0	0	0	(3,38)	0	0	0	0	0
(4,37)	0	0	0	0	0	(4,38)	0	0	0	0	0
(5,37)	0	0	0	0	0	(5,38)	0	0	0	0	0
(6,37)	0	0	0	0	0	(6,38)	0	0	0	0	0
(7,37)	0	0	0	0	0	(7,38)	0	0	0	0	0
(8,37)	0	0	0	0	0	(8,38)	0	0	0	0	0
(9,37)	0	0	0	0	0	(9,38)	0	0	0	0	0
(10,37)	0	0	0	0	0	(10,38)	0	0	0	0	0
(11,37)	0	0	0	0	0	(11,38)	18	153	30	5	25
(12,37)	0	0	0	0	0	(12,38)	52	475	74	15	25
(13,37)	0	0	0	0	0	(13,38)	0	0	0	0	0
(14,37)	13	34	61	35	465	(14,38)	221	572	1035	1613	7875
(15,37)	87	226	409	637	3108	(15,38)	131	340	615	958	4876
(16,37)	83	215	389	606	2960	(16,38)	45	60	221	398	1896
(17,37)	11	29	52	82	398	(17,38)	1	2	6	11	54
(18,37)	7	8	32	59	282	(18,38)	3	3	13	24	114
(19,37)	87	119	442	829	3561	(19,38)	22	37	33	166	773
(20,37)	16	26	50	516	2501	(20,38)	43	70	245	473	2293
(21,37)	87	135	481	913	4401	(21,38)	42	55	219	385	1817
(22,37)	155	137	701	977	4322	(22,38)	136	116	633	903	3370
(23,37)	66	58	295	402	1793	(23,38)	140	111	709	1014	4581
(24,37)	65	52	332	471	2137	(24,38)	58	45	301	428	1949
(25,37)	106	84	540	745	3463	(25,38)	93	79	504	719	3264
(26,37)	0	0	0	0	0	(26,38)	443	842	1543	2544	11593
(27,37)	0	0	0	0	0	(27,38)	164	195	451	591	2692
(28,37)	0	0	0	0	0	(28,38)	43	83	191	248	1129
(29,37)	48	94	215	279	1269	(29,38)	213	476	369	486	2203
(30,37)	114	223	612	613	3021	(30,38)	61	165	52	69	312
(31,37)	569	1056	2487	3315	14043	(31,38)	13	25	1318	1827	8056
(32,37)	136	277	550	783	3387	(32,38)	222	507	393	546	2410
(33,37)	314	698	1395	2208	9766	(33,38)	87	152	0	0	0
(34,37)	1266	2868	5707	9294	41053	(34,38)	0	0	0	0	0
(35,37)	935	2121	4215	6879	30384	(35,38)	0	0	0	0	0
(36,37)	0	0	0	0	0	(36,38)	0	0	0	0	0
(37,37)	0	0	0	0	0	(37,38)	0	0	0	0	0
(38,37)	0	0	0	0	0	(38,38)	0	0	0	0	0
(39,37)	0	0	0	0	0	(39,38)	0	0	0	0	0
(40,37)	0	0	0	0	0	(40,38)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

AREA SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,39)	0	0	0	0	0	(1,40)	0	0	0	0	0
(2,39)	0	0	0	0	0	(2,40)	0	0	0	0	0
(3,39)	0	0	0	0	0	(3,40)	0	0	0	0	0
(4,39)	0	0	0	0	0	(4,40)	0	0	0	0	0
(5,39)	0	0	0	0	0	(5,40)	0	0	0	0	0
(6,39)	0	0	0	0	0	(6,40)	0	0	0	0	0
(7,39)	0	0	0	0	0	(7,40)	0	0	0	0	0
(8,39)	0	0	0	0	0	(8,40)	0	0	0	0	0
(9,39)	0	0	0	0	0	(9,40)	0	0	0	0	0
(10,39)	0	0	0	0	0	(10,40)	0	0	0	0	0
(11,39)	73	557	189	17	22	(11,40)	0	0	0	0	0
(12,39)	955	7166	2089	226	308	(12,40)	0	0	0	0	0
(13,39)	0	0	0	0	0	(13,40)	0	0	0	0	0
(14,39)	0	0	0	0	0	(14,40)	0	0	0	0	0
(15,39)	10	26	47	73	358	(15,40)	0	0	0	0	0
(16,39)	33	48	160	230	1381	(16,40)	0	0	0	0	0
(17,39)	97	124	976	831	4180	(17,40)	18	27	145	1336	11708
(18,39)	77	98	375	633	3282	(18,40)	40	68	290	1440	24014
(19,39)	36	61	147	200	1193	(19,40)	352	597	2538	5407	2856
(20,39)	33	67	161	204	1308	(20,40)	765	905	3662	625	19363
(21,39)	101	170	447	610	3792	(21,40)	82	63	434	4253	13413
(22,39)	185	161	966	1433	3328	(22,40)	605	520	3075	2996	1114
(23,39)	115	117	580	753	3536	(23,40)	433	400	2214	244	29182
(24,39)	114	105	582	739	3536	(24,40)	32	25	169	7759	965
(25,39)	48	37	256	369	1687	(25,40)	1711	1124	4949	212	1461
(26,39)	41	32	218	318	1433	(26,40)	37	70	162	318	2153
(27,39)	60	112	258	338	1538	(27,40)	56	105	243	477	5620
(28,39)	69	129	297	389	1771	(28,40)	85	174	362	1245	11115
(29,39)	312	603	1352	1735	8442	(29,40)	223	481	1965	2465	10888
(30,39)	241	506	1039	1443	6456	(30,40)	438	937	1765	2515	7959
(31,39)	32	68	146	195	871	(31,40)	362	537	1283	1838	1005
(32,39)	44	65	212	303	1314	(32,40)	255	332	162	232	0
(33,39)	290	430	1406	2015	8723	(33,40)	33	50	0	0	0
(34,39)	118	174	569	816	3532	(34,40)	0	0	0	0	0
(35,39)	0	0	0	0	0	(35,40)	0	0	0	0	0
(36,39)	0	0	0	0	0	(36,40)	0	0	0	0	0
(37,39)	0	0	0	0	0	(37,40)	0	0	0	0	0
(38,39)	0	0	0	0	0	(38,40)	0	0	0	0	0
(39,39)	0	0	0	0	0	(39,40)	0	0	0	0	0
(40,39)	0	0	0	0	0	(40,40)	0	0	0	0	0

SECTION E-3
GRIDDED POINT AND AREA SOURCE EMISSIONS (TONS/YEAR)
ON THE 20-KM GRID NETWORK

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

TOTAL SOURCE EMISSIONS

GRID PT	FART	SQ2	NOX	HC	EC	GRID PT	PART	SQ2	NOX	HC	ICO
(1, 1)	5009	3294	4817	6508	33601	(1, 2)	778	694	1221	1807	8912
(2, 1)	1336	1359	1888	2126	13292	(2, 2)	2383	2287	702	1030	5046
(3, 1)	1573	1161	2706	3925	19152	(3, 2)	1265	1020	1977	2811	18342
(4, 1)	1344	275	482	632	3037	(4, 2)	478	336	422	616	3235
(5, 1)	1284	939	1720	1711	8106	(5, 2)	76200	391908	68557	1737	7322
(6, 1)	4023	54470	6525	7775	33377	(6, 2)	558	446	772	775	3670
(7, 1)	189	2083	718	332	1623	(7, 2)	448	1245	1097	768	3370
(8, 1)	47	33	333	313	1356	(8, 2)	232	20068	4211	312	1276
(9, 1)	53	37	347	390	1663	(9, 2)	71	69	440	465	2122
(10, 1)	133	167	849	839	4363	(10, 2)	1936	1858	7450	2668	13270
(11, 1)	134	208	818	949	8476	(11, 2)	37	63	203	228	1088
(12, 1)	42	65	219	255	1137	(12, 2)	380	205	471	568	2553
(13, 1)	158	127	318	347	1615	(13, 2)	690	374	960	1056	14844
(14, 1)	0	0	0	0	0	(14, 2)	24	46	116	127	591
(15, 1)	59	29	183	211	837	(15, 2)	480	18	119	137	542
(16, 1)	0	0	0	0	0	(16, 2)	29	14	88	101	403
(17, 1)	144	224	690	954	3915	(17, 2)	1803	111	371	459	2142
(18, 1)	733	770	1912	2260	10528	(18, 2)	1107	498	1679	2079	9652
(19, 1)	603	1231	1057	919	4040	(19, 2)	113	126	563	713	3392
(20, 1)	440	513	2302	3666	14703	(20, 2)	16839	293	453	605	1902
(21, 1)	188	188	647	1034	3736	(21, 2)	48	59	212	275	1219
(22, 1)	666	78	388	530	2100	(22, 2)	54	65	249	329	1501
(23, 1)	46	31	161	211	833	(23, 2)	96	178	445	597	2871
(24, 1)	632	372	196	180	345	(24, 2)	346	74	310	446	1569
(25, 1)	79	72	312	490	1736	(25, 2)	42	38	101	236	876
(26, 1)	33	31	130	210	826	(26, 2)	65	88	304	450	1817
(27, 1)	38	39	159	228	985	(27, 2)	92	90	249	373	1538
(28, 1)	2907	3502	1670	1100	15783	(28, 2)	137	207	712	1014	4295
(29, 1)	68	64	389	537	2468	(29, 2)	53	59	274	400	1675
(30, 1)	38	36	210	314	1356	(30, 2)	88	8	45	67	290
(31, 1)	6	9	32	168	257	(31, 2)	0	123	452	347	3575
(32, 1)	33	46	168	353	1332	(32, 2)	19	27	97	204	771
(33, 1)	0	0	0	0	0	(33, 2)	0	0	0	0	0
(34, 1)	0	0	0	0	0	(34, 2)	0	0	0	0	0
(35, 1)	0	0	0	0	0	(35, 2)	0	0	0	0	0
(36, 1)	0	0	0	0	0	(36, 2)	0	0	0	0	0
(37, 1)	0	0	0	0	0	(37, 2)	0	0	0	0	0
(38, 1)	0	0	0	0	0	(38, 2)	0	0	0	0	0
(39, 1)	0	0	0	0	0	(39, 2)	0	0	0	0	0
(40, 1)	0	0	0	0	0	(40, 2)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	EC	GRID PT	PART	SO2	NOX	HC	CO
(1, 3)	4316	4979	5559	8140	30975	(1, 4)	669	919	1255	1775	9038
(2, 3)	31722	10281	37668	71132	297870	(2, 4)	300	289	460	664	3336
(3, 3)	29326	95573	28996	4511	27236	(3, 4)	21330	207132	37393	787	3355
(4, 3)	34	33	68	105	502	(4, 4)	2406	3148	1905	2421	11719
(5, 3)	215	219	520	844	3901	(5, 4)	157	159	239	345	1672
(6, 3)	1368	659	1039	732	3331	(6, 4)	409	479	673	744	3943
(7, 3)	606	523	1365	1239	5981	(7, 4)	52083	372164	77527	1819	6652
(8, 3)	70	74	510	526	2523	(8, 4)	30	33	211	212	1012
(9, 3)	33	36	216	237	1143	(9, 4)	42	81	275	311	1518
(10, 3)	2844	221601	124426	2005	8849	(10, 4)	910	204	1894	2166	10655
(11, 3)	190	270	1062	1234	5939	(11, 4)	322	9525	3705	2097	9983
(12, 3)	33	63	153	178	818	(12, 4)	1299	780	540	632	2816
(13, 3)	108	125	357	322	1383	(13, 4)	61	119	262	309	1406
(14, 3)	61	61	173	157	671	(14, 4)	1556	107046	27275	645	2397
(15, 3)	55	61	219	231	993	(15, 4)	161	37	132	139	597
(16, 3)	32	41	141	144	610	(16, 4)	100	86	266	281	1165
(17, 3)	65	71	254	298	1750	(17, 4)	18	72	75	75	312
(18, 3)	120	65	553	636	2940	(18, 4)	41	41	662	789	3285
(19, 3)	103	342	512	604	2865	(19, 4)	41	76	185	228	1157
(20, 3)	151	188	227	302	1308	(20, 4)	66	50	244	336	1338
(21, 3)	151	188	662	245	3969	(21, 4)	2414	187	843	900	5018
(22, 3)	20	24	107	137	614	(22, 4)	47	54	259	341	1515
(23, 3)	1357	5002	2718	6361	12607	(23, 4)	682	44637	13600	3276	7542
(24, 3)	138	147	683	945	3825	(24, 4)	6	7	36	52	209
(25, 3)	78	86	360	523	1956	(25, 4)	5926	61323	22072	1491	5038
(26, 3)	125	103	357	518	2134	(26, 4)	98	52	275	478	1743
(27, 3)	505	281	822	884	3664	(27, 4)	111	75	366	593	2276
(28, 3)	46	53	232	369	1533	(28, 4)	64	31	171	304	1089
(29, 3)	155	291	470	624	2593	(29, 4)	15	18	62	133	632
(30, 3)	0	0	0	0	0	(30, 4)	0	0	0	0	0
(31, 3)	64	77	351	571	2286	(31, 4)	38	46	209	340	1359
(32, 3)	51	62	276	467	1851	(32, 4)	7	8	38	61	244
(33, 3)	0	0	0	0	0	(33, 4)	0	0	0	0	0
(34, 3)	0	0	0	0	0	(34, 4)	0	0	0	0	0
(35, 3)	0	0	0	0	0	(35, 4)	0	0	0	0	0
(36, 3)	0	0	0	0	0	(36, 4)	0	0	0	0	0
(37, 3)	0	0	0	0	0	(37, 4)	0	0	0	0	0
(38, 3)	0	0	0	0	0	(38, 4)	0	0	0	0	0
(39, 3)	0	0	0	0	0	(39, 4)	0	0	0	0	0
(40, 3)	0	0	0	0	0	(40, 4)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20NM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	HC
(1, 5)	967	1350	1805	2524	12972	(1, 6)	156	224	393	565	2893
(2, 5)	2760	2756	1420	1628	17122	(2, 6)	255	366	640	921	4716
(3, 5)	445	736	841	1157	6196	(3, 6)	9663	7077	1494	1368	6788
(4, 5)	62	66	85	123	607	(4, 6)	2226	2349	1566	2356	11834
(5, 5)	179	220	325	471	2257	(5, 6)	123	149	279	458	2130
(6, 5)	605	836	1102	1457	7034	(6, 6)	706	810	1229	1756	8345
(7, 5)	4843	86704	16751	3859	18017	(7, 6)	11332	13234	6492	9533	27219
(8, 5)	56	66	434	339	1864	(8, 6)	164	1977	516	528	2724
(9, 5)	42	63	200	369	1758	(9, 6)	115	177	747	985	4776
(10, 5)	72	92	463	536	2867	(10, 6)	3860	18746	30224	1878	8400
(11, 5)	5174	144262	28406	3206	14987	(11, 6)	792	1061	2501	3416	17050
(12, 5)	1068	26205	6304	680	2687	(12, 6)	274	259	283	326	1590
(13, 5)	81	132	402	433	2273	(13, 6)	42	56	251	306	1487
(14, 5)	59	87	352	438	2113	(14, 6)	44	56	251	306	1487
(15, 5)	32	56	148	214	845	(15, 6)	10125	75675	26443	2756	10289
(16, 5)	90	50	214	218	892	(16, 6)	92	96	384	406	1693
(17, 5)	36	39	150	151	625	(17, 6)	30	29	123	125	510
(18, 5)	9438	99	358	735	3385	(18, 6)	414	191	100	691	3323
(19, 5)	34194	18132	6498	1224	5940	(19, 6)	13243	1125	2822	4066	16538
(20, 5)	52	60	285	370	1615	(20, 6)	861	105	393	724	3024
(21, 5)	90	105	499	653	2873	(21, 6)	119	115	578	883	3588
(22, 5)	2198	547	2195	3256	15673	(22, 6)	588	833	3026	5011	22573
(23, 5)	1266	935	2837	4115	20306	(23, 6)	5997	9261	26410	48172	207926
(24, 5)	596	1651	2283	2403	10168	(24, 6)	4803	20195	23006	22760	119654
(25, 5)	185	108	781	1193	5047	(25, 6)	155	103	719	1184	5634
(26, 5)	235	115	639	1139	4118	(26, 6)	4232	62867	14099	831	3261
(27, 5)	613	756	1736	2586	9333	(27, 6)	15	12	65	116	510
(28, 5)	23	11	61	109	390	(28, 6)	19	17	80	147	659
(29, 5)	37	30	110	217	981	(29, 6)	33	33	172	270	1254
(30, 5)	142	115	453	399	3765	(30, 6)	82	67	270	525	2204
(31, 5)	92	110	501	813	3256	(31, 6)	34	31	146	223	1012
(32, 5)	82	425	378	506	2000	(32, 6)	60	114	315	496	1998
(33, 5)	0	0	0	0	0	(33, 6)	0	0	0	0	0
(34, 5)	0	0	0	0	0	(34, 6)	0	0	0	0	0
(35, 5)	0	0	0	0	0	(35, 6)	0	0	0	0	0
(36, 5)	0	0	0	0	0	(36, 6)	0	0	0	0	0
(37, 5)	0	0	0	0	0	(37, 6)	0	0	0	0	0
(38, 5)	0	0	0	0	0	(38, 6)	0	0	0	0	0
(39, 5)	0	0	0	0	0	(39, 6)	0	0	0	0	0
(40, 5)	0	0	0	0	0	(40, 6)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1, 7)	1620	1759	2109	2980	15233	(1, 8)	1508	5504	1977	2837	14373
(2, 7)	1401	1279	1415	1897	9592	(2, 8)	10119	13937	12264	15982	77507
(3, 7)	3461	9871	2249	3426	16773	(3, 8)	35376	30510	18647	78054	161057
(4, 7)	397	685	650	676	3397	(4, 8)	1033	1117	1763	2253	11076
(5, 7)	240	339	684	1073	5222	(5, 8)	1770	190	730	600	3003
(6, 7)	833	714	1018	1273	6311	(6, 8)	16734	438616	84509	4243	18328
(7, 7)	124726	141947	23985	11139	54018	(7, 8)	22712	75859	71638	3217	46562
(8, 7)	3155	5152	3545	1424	11785	(8, 8)	406	734	2206	2937	15975
(9, 7)	1143	1805	4048	5559	27430	(9, 8)	3855	7092	16187	23914	131716
(10, 7)	2536	2086	6316	6841	24415	(10, 8)	19675	164654	29559	10169	55643
(11, 7)	911	1679	3492	4823	23107	(11, 8)	983	936	2584	3447	18429
(12, 7)	66	139	324	443	2316	(12, 8)	77	151	185	519	2695
(13, 7)	37	64	162	206	1157	(13, 8)	3492	487	1221	1544	8885
(14, 7)	1124	158	518	655	3636	(14, 8)	71	100	309	333	2206
(15, 7)	633	1528	3809	4761	24284	(15, 8)	59	123	295	381	1672
(16, 7)	2390	882	380	224	1104	(16, 8)	144	74	70	91	395
(17, 7)	43	48	203	218	1048	(17, 8)	78	123	567	795	3655
(18, 7)	31	44	169	183	501	(18, 8)	1301	92	374	450	2159
(19, 7)	588	4406	3062	1724	6166	(19, 8)	5667	5667	4309	2588	12221
(20, 7)	531	1310	854	831	3558	(20, 8)	315	263	1393	2089	10078
(21, 7)	21723	38233	11922	1572	6736	(21, 8)	2252	18192	4221	3035	15365
(22, 7)	283	304	1655	2700	14020	(22, 8)	264	272	1763	2899	15878
(23, 7)	8525	21386	40862	54581	288511	(23, 8)	811	601	4024	6433	34523
(24, 7)	7604	22060	30545	39415	202843	(24, 8)	5167	1796	7514	11272	57262
(25, 7)	303	253	5850	2489	11911	(25, 8)	988	1020	4947	7519	36180
(26, 7)	135	115	645	1046	4691	(26, 8)	56	44	256	410	1811
(27, 7)	37	39	132	310	1465	(27, 8)	187	260	1236	1643	7697
(28, 7)	315	363	1347	2125	9511	(28, 8)	143	647	710	1077	4965
(29, 7)	420	7060	6088	447	1700	(29, 8)	881	6547	2630	3016	11766
(30, 7)	658	791	2888	4005	18841	(30, 8)	225	150	976	1681	8028
(31, 7)	107	106	427	643	2913	(31, 8)	575	160	684	1091	5067
(32, 7)	45	41	183	285	1274	(32, 8)	176	0	720	1123	5012
(33, 7)	0	0	0	0	0	(33, 8)	0	0	0	0	0
(34, 7)	0	0	0	0	0	(34, 8)	0	0	0	0	0
(35, 7)	0	0	0	0	0	(35, 8)	0	0	0	0	0
(36, 7)	0	0	0	0	0	(36, 8)	0	0	0	0	0
(37, 7)	0	0	0	0	0	(37, 8)	0	0	0	0	0
(38, 7)	0	0	0	0	0	(38, 8)	0	0	0	0	0
(39, 7)	0	0	0	0	0	(39, 8)	0	0	0	0	0
(40, 7)	0	0	0	0	0	(40, 8)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1. 9)	2871	3119	4292	6586	31506	(1.101	13530	12023	11946	21966	83301
(2. 9)	35199	137200	31374	41592	145505	(2.101	7178	6596	7068	14195	53409
(3. 9)	42078	8900	3056	4414	17060	(3.101	1276	1499	2439	3959	19800
(4. 9)	5103	5623	3821	4756	22741	(4.101	692	598	592	1133	4403
(5. 9)	2396	1356	4963	2041	20884	(5.101	8171	4116	7461	9382	43165
(6. 9)	1052	1162	4267	2541	11855	(6.101	31759	108252	27376	2572	12129
(7. 9)	3128	36554	11906	9782	27527	(7.101	1133	5182	4993	4610	28628
(8. 9)	42716	55273	13921	11410	54445	(8.101	554	775	2167	2316	12080
(9. 9)	46155	64638	56745	47140	75505	(9.101	3336	2784	4310	5947	29354
(10. 9)	6538	9100	11378	13117	59367	(10.101	341	6144	11541	4632	27225
(11. 9)	20042	213666	43598	10084	6446	(11.101	5493	187185	801	1037	6541
(12. 9)	180	322	524	1226	6244	(12.101	1682	275	33224	1618	7055
(13. 9)	200	348	874	1113	6244	(13.101	315	1763	5014	6356	35496
(14. 9)	121	209	532	678	3730	(14.101	315	529	1432	1821	10022
(15. 9)	131	222	659	652	3700	(15.101	108	182	542	701	3044
(16. 9)	4595	183	545	705	3061	(16.101	86	142	433	559	2444
(17. 9)	2175	44	212	275	1301	(17.101	70	77	339	480	2087
(18. 9)	130	300	535	716	3559	(18.101	2212	242	346	1072	5577
(19. 9)	1684	1565	4792	7506	34961	(19.101	2308	5876	346	3185	22147
(20. 9)	120	93	493	741	3569	(20.101	784	502	1230	1662	8189
(21. 9)	304	213	1153	1045	8102	(21.101	31626	40654	5654	1468	6081
(22. 9)	216	287	1111	1259	5917	(22.101	477	434	2545	2874	13173
(23. 9)	1360	1450	7605	10441	53293	(23.101	14544	28055	27598	16009	125745
(24. 9)	11033	34889	52712	70160	232218	(24.101	3622	8117	20772	28556	146403
(25. 9)	2026	17084	21300	94202	39737	(25.101	862	984	2846	3525	18130
(26. 9)	110	80	498	841	3709	(26.101	162	179	803	1326	6092
(27. 9)	106	82	485	753	3337	(27.101	82	50	356	571	2466
(28. 9)	106	78	456	640	2954	(28.101	273	202	629	1069	4723
(29. 9)	530	180	727	1259	6007	(29.101	715	367	1740	2697	12650
(30. 9)	1921	308	960	1755	7801	(30.101	322	691	656	987	4693
(31. 9)	1524	25446	7442	1133	5734	(31.101	287	174	565	987	4716
(32. 9)	33	21	91	154	722	(32.101	0	0	0	0	0
(33. 9)	0	0	0	0	0	(33.101	0	0	0	0	0
(34. 9)	0	0	0	0	0	(34.101	0	0	0	0	0
(35. 9)	0	0	0	0	0	(35.101	0	0	0	0	0
(36. 9)	0	0	0	0	0	(36.101	0	0	0	0	0
(37. 9)	0	0	0	0	0	(37.101	0	0	0	0	0
(38. 9)	0	0	0	0	0	(38.101	0	0	0	0	0
(39. 9)	0	0	0	0	0	(39.101	0	0	0	0	0
(40. 9)	0	0	0	0	0	(40.101	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20NM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	ICO	GRID PT	PART	SO2	NOX	HC	ICO
(1,11)	1 2829	183540	92477	140120	517051	(1,12)	18871	186965	39089	23238	92628
(2,11)	2036	2851	2480	3813	16068	(2,12)	1297	1553	2278	3255	14900
(3,11)	916	854	1179	1859	858	(3,12)	694	606	1045	1503	6925
(4,11)	19161	12731	5912	11297	56325	(4,12)	1105	770	898	1386	6507
(5,11)	58423	90982	35643	31550	160903	(5,12)	1927	1880	2878	3613	17746
(6,11)	2902	1580	4357	4046	23032	(6,12)	344	250	1027	1267	6573
(7,11)	207	392	1109	1384	7255	(7,12)	363	320	1277	1585	8196
(8,11)	695	994	3440	4125	21323	(8,12)	47	76	278	354	1820
(9,11)	503	231	915	1167	5858	(9,12)	4238	8517	2391	1137	5404
(10,11)	13402	96749	27075	2877	13438	(10,12)	80	154	498	628	2992
(11,11)	3473	22185	50915	2216	9449	(11,12)	82	149	472	597	2873
(12,11)	31421	277136	56113	3340	14846	(12,12)	234	397	1093	746	3611
(13,11)	446	461	1314	1531	8494	(13,12)	343	619	1495	1381	7613
(14,11)	1201	1762	1793	1668	9356	(14,12)	349	619	1495	1381	7613
(15,11)	2623	1762	1793	2042	11670	(15,12)	34959	12491	6178	4284	24743
(16,11)	7160	2261	139	508	2483	(16,12)	296	585	903	1045	5566
(17,11)	1046	139	292	348	1856	(17,12)	33	254	570	685	3652
(18,11)	243	121	421	535	2784	(18,12)	33	50	174	220	1176
(19,11)	1468	542	1487	1880	9744	(19,12)	103	174	543	716	4116
(20,11)	777	418	1683	2009	10077	(20,12)	218	462	1121	1425	8001
(21,11)	1036	600	2594	3164	19032	(21,12)	298	505	1404	1833	9888
(22,11)	214	234	1079	1306	6710	(22,12)	5654	15171	9365	8753	46424
(23,11)	111	159	620	916	4828	(23,12)	156	269	757	940	5123
(24,11)	359	320	1960	2532	12833	(24,12)	8176	8487	3065	410	2068
(25,11)	908	977	4203	4203	20503	(25,12)	813	736	2673	3336	15661
(26,11)	59	51	306	511	2324	(26,12)	266	242	1224	1574	7670
(27,11)	80	51	283	515	2324	(27,12)	133	40	146	217	1017
(28,11)	1815	7224	5533	5711	25244	(28,12)	89	89	300	317	1276
(29,11)	441	198	898	1125	7133	(29,12)	239	91	305	322	1297
(30,11)	332	418	1958	1309	4507	(30,12)	581	74	248	263	1054
(31,11)	0	0	0	0	0	(31,12)	0	625	2957	2012	6931
(32,11)	0	0	0	0	0	(32,12)	0	0	0	0	0
(33,11)	0	0	0	0	0	(33,12)	0	0	0	0	0
(34,11)	0	0	0	0	0	(34,12)	0	0	0	0	0
(35,11)	0	0	0	0	0	(35,12)	0	0	0	0	0
(36,11)	0	0	0	0	0	(36,12)	0	0	0	0	0
(37,11)	0	0	0	0	0	(37,12)	0	0	0	0	0
(38,11)	0	0	0	0	0	(38,12)	0	0	0	0	0
(39,11)	0	0	0	0	0	(39,12)	0	0	0	0	0
(40,11)	0	0	0	0	0	(40,12)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1.13)	5638	41312	7791	2105	9319	(1.14)	0	0	0	0	0
(2.13)	5427	9769	3915	17324	22002	(2.14)	309	410	403	731	3511
(3.13)	523	590	707	1025	4963	(3.14)	23610	80847	14082	4726	22405
(4.13)	530	294	353	511	2473	(4.14)	235	201	426	691	2858
(5.13)	280	330	1110	1407	7107	(5.14)	117	207	587	864	4056
(6.13)	180	139	548	681	3475	(6.14)	5159	8468	5315	2880	13452
(7.13)	250	384	1237	1610	8000	(7.14)	123	232	726	940	4686
(8.13)	70	131	416	535	2070	(8.14)	440	8431	1558	1464	6473
(9.13)	777	308	1153	1384	6587	(9.14)	49	AC	313	390	1826
(10.13)	161	150	514	734	3511	(10.14)	38	65	235	269	1295
(11.13)	457	229	1839	1714	4525	(11.14)	145	245	861	586	4014
(12.13)	03	160	510	535	2902	(12.14)	263	585	1250	1522	7383
(13.13)	77	180	345	428	2072	(13.14)	18301	78714	16209	1857	8600
(14.13)	129	297	582	722	3526	(14.14)	240	525	995	1222	6022
(15.13)	12924	5730	2058	1274	7168	(15.14)	65	120	317	387	2202
(16.13)	63	125	262	313	1663	(16.14)	3093	3614	4214	3338	10650
(17.13)	133	227	527	654	3611	(17.14)	2131	1711	2284	2185	13809
(18.13)	40	59	200	245	1191	(18.14)	137	213	634	789	3957
(19.13)	103	151	553	630	3500	(19.14)	2012	249	805	960	4646
(20.13)	12210	2704	4745	6008	34056	(20.14)	259	440	1179	1551	8353
(21.13)	11435	23774	14877	8601	47813	(21.14)	17928	5847	4957	5892	32296
(22.13)	12953	302030	91255	4150	21303	(22.14)	9461	1109	1329	2043	9373
(23.13)	3631	2315	5790	7572	41120	(23.14)	1313	5313	5349	7727	35970
(24.13)	318	316	808	1066	6599	(24.14)	1993	24358	13335	2767	17904
(25.13)	219	347	1159	1482	7978	(25.14)	4163	3310	6472	3900	28097
(26.13)	4663	3713	8987	16588	61897	(26.14)	1837	3124	4621	5698	29718
(27.13)	20250	169136	29860	21333	42585	(27.14)	11494	51605	30122	33461	109746
(28.13)	272	264	1230	1180	4737	(28.14)	8156	121078	27912	4192	18501
(29.13)	5128	7551	7361	5678	24783	(29.14)	1033	1004	3503	3875	17020
(30.13)	712	149	563	533	4950	(30.14)	146	732	759	809	3517
(31.13)	4881	35009	8384	1752	6068	(31.14)	680	1144	3929	4427	19150
(32.13)	0	0	0	0	0	(32.14)	601	984	3528	4077	17356
(33.13)	0	0	0	0	0	(33.14)	0	0	0	0	0
(34.13)	0	0	0	0	0	(34.14)	0	0	0	0	0
(35.13)	0	0	0	0	0	(35.14)	0	0	0	0	0
(36.13)	0	0	0	0	0	(36.14)	0	0	0	0	0
(37.13)	0	0	0	0	0	(37.14)	0	0	0	0	0
(38.13)	0	0	0	0	0	(38.14)	0	0	0	0	0
(39.13)	0	0	0	0	0	(39.14)	0	0	0	0	0
(40.13)	0	0	0	0	0	(40.14)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,15)	0	0	0	0	0	(1,16)	0	0	0	0	0
(2,15)	0	0	0	0	0	(2,16)	0	0	0	0	0
(3,15)	632	713	855	1219	5997	(3,16)	0	0	0	0	0
(4,15)	206	563	679	816	4277	(4,16)	95	350	467	505	2693
(5,15)	145	475	725	865	4441	(5,16)	2012	5937	6102	7506	3686
(6,15)	89	157	507	656	3081	(6,16)	145	533	690	793	4283
(7,15)	204	262	887	1189	5423	(7,16)	159	513	803	936	4832
(8,15)	27	53	177	205	954	(8,16)	9410	170	406	462	2226
(9,15)	25	59	193	132	776	(9,16)	18	27	111	126	606
(10,15)	24	55	177	178	735	(10,16)	50	80	307	349	1677
(11,15)	128	242	698	764	3854	(11,16)	462	9930	2328	741	3475
(12,15)	106	216	543	595	3021	(12,16)	206	406	1077	1153	5916
(13,15)	0	0	0	0	0	(13,16)	12	19	59	60	295
(14,15)	43	100	192	238	1152	(14,16)	14	21	71	68	334
(15,15)	57	106	279	340	1937	(15,16)	13	23	59	69	390
(16,15)	13767	3611	1323	1374	7747	(16,16)	2958	14893	4444	1643	8168
(17,15)	55	101	261	320	1813	(17,16)	105	179	460	537	2996
(18,15)	75	129	352	417	2157	(18,16)	105	202	522	583	3231
(19,15)	100	165	483	575	2922	(19,16)	19428	13995	15963	3199	16684
(20,15)	203	391	819	1144	5251	(20,16)	391	738	1487	2004	11118
(21,15)	85	163	354	466	2591	(21,16)	171	283	740	1000	5586
(22,15)	1615	1908	4029	4311	28539	(22,16)	346	1199	1317	1747	8406
(23,15)	1033	988	2325	3023	16847	(23,16)	505	471	1306	1551	10278
(24,15)	3719	95945	15374	4376	23917	(24,16)	17546	20304	10081	10045	54770
(25,15)	359	3163	2284	2401	12929	(25,16)	1208	6214	5304	5376	31443
(26,15)	2381	3093	6949	8283	44840	(26,16)	19311	5088	8925	10599	61439
(27,15)	20337	45641	73952	94537	459850	(27,16)	14431	18899	40131	53501	312186
(28,15)	8877	21351	42525	155057	275476	(28,16)	8963	30828	46726	49478	233293
(29,15)	1088	598	1900	2476	12715	(29,16)	673	1056	3623	3818	18437
(30,15)	176	284	1036	1199	5251	(30,16)	73	86	470	583	2901
(31,15)	81	112	495	583	2419	(31,16)	46	59	290	343	1322
(32,15)	25	39	147	183	757	(32,16)	40	68	247	293	1125
(33,15)	0	0	0	0	0	(33,16)	0	0	0	0	0
(34,15)	0	0	0	0	0	(34,16)	0	0	0	0	0
(35,15)	0	0	0	0	0	(35,16)	0	0	0	0	0
(36,15)	0	0	0	0	0	(36,16)	0	0	0	0	0
(37,15)	0	0	0	0	0	(37,16)	0	0	0	0	0
(38,15)	0	0	0	0	0	(38,16)	0	0	0	0	0
(39,15)	0	0	0	0	0	(39,16)	0	0	0	0	0
(40,15)	0	0	0	0	0	(40,16)	0	0	0	0	0

ANNUAL EMISSION RATES (TONE/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20NM)

TOTAL SOURCE EMISSIONS

GRID PY	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1.17)	0	0	0	0	0	(1.18)	0	0	0	0	0
(2.17)	0	0	0	0	0	(2.18)	0	0	0	0	0
(3.17)	0	0	0	0	0	(3.18)	0	0	0	0	0
(4.17)	0	0	0	0	0	(4.18)	262	263	66	452	9
(5.17)	7358	40769	10309	4770	22387	(5.18)	76	134	409	602	3138
(6.17)	111	553	580	647	3459	(6.18)	1300	5627	3421	683	3040
(7.17)	53	92	275	416	2187	(7.18)	1741	1076	4015	6113	24464
(8.17)	80	124	473	563	2821	(8.18)	75	61	206	101	1567
(9.17)	4228	15244	4541	2069	31347	(9.18)	6360	3768	3256	2120	10117
(10.17)	20	20	12	147	707	(10.18)	105	132	584	703	3410
(11.17)	17	23	103	123	595	(11.18)	85	183	496	593	2834
(12.17)	9	12	52	63	302	(12.18)	43	38	299	348	1603
(13.17)	103	146	519	499	2405	(13.18)	4	3	26	31	142
(14.17)	6	9	30	35	182	(14.18)	2	4	7	9	51
(15.17)	62	104	266	307	1706	(15.18)	1461	26	53	68	379
(16.17)	40	67	170	136	1091	(16.18)	111	210	428	546	3037
(17.17)	282	566	1033	1265	7028	(17.18)	1195	2348	4358	5001	28618
(18.17)	70	133	308	369	2049	(18.18)	313	424	898	1129	6929
(19.17)	6203	23883	7915	2650	14455	(19.18)	786	1169	2193	2515	15575
(20.17)	3837	2568	2488	2263	12138	(20.18)	340	584	1394	1233	7599
(21.17)	571	1037	2276	2937	16728	(21.18)	1108	1171	2897	7400	23125
(22.17)	1773	2179	4641	5116	29212	(22.18)	656	1194	2049	2916	16233
(23.17)	127	219	535	712	3995	(23.18)	2263	4221	4071	4363	24142
(24.17)	8854	1072	1728	2236	18115	(24.18)	15824	27816	14077	13744	117564
(25.17)	1310	2090	4685	5945	34278	(25.18)	3669	12258	1401	1875	5883
(26.17)	667	1433	2983	3664	21317	(26.18)	278	562	1401	1494	6744
(27.17)	1150	3516	5019	5780	33544	(27.18)	5547	11148	2816	12162	44088
(28.17)	16607	11795	51055	24144	136058	(28.18)	368	944	4601	10413	19209
(29.17)	1139	1327	5550	5948	29068	(29.18)	1417	975	2816	3851	26351
(30.17)	1102	789	2393	306	3597	(30.18)	1009	1734	5961	5906	29675
(31.17)	650	1246	3302	3498	13451	(31.18)	58	132	284	452	2117
(32.17)	129	288	638	1101	4655	(32.18)	58	132	284	452	2117
(33.17)	0	0	0	0	0	(33.18)	0	0	0	0	0
(34.17)	0	0	0	0	0	(34.18)	0	0	0	0	0
(35.17)	0	0	0	0	0	(35.18)	0	0	0	0	0
(36.17)	0	0	0	0	0	(36.18)	0	0	0	0	0
(37.17)	0	0	0	0	0	(37.18)	0	0	0	0	0
(38.17)	0	0	0	0	0	(38.18)	0	0	0	0	0
(39.17)	0	0	0	0	0	(39.18)	0	0	0	0	0
(40.17)	0	0	0	0	0	(40.18)	0	0	0	0	0

ANNUAL EMISSION RATES (T/MC/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID FT	PART	S02	NOX	HC	CO
(1,13)	0	0	0	0	0	(1,20)	0	0	0	0	0
(2,13)	0	0	0	0	0	(2,20)	0	0	0	0	0
(3,13)	30	93	158	224	987	(3,20)	0	0	0	0	0
(4,13)	5	13	27	41	168	(4,20)	760	107262	19684	328	1091
(5,13)	0	0	0	0	0	(5,20)	0	0	0	0	0
(6,13)	154	58	133	211	1140	(6,20)	0	0	0	0	0
(7,13)	1785	762	16744	2985	15875	(7,20)	149	256	659	1016	5016
(8,13)	66	67	267	321	1706	(8,20)	700	288	894	1126	5103
(9,13)	145	88	472	576	2324	(9,20)	135	82	353	486	2207
(10,13)	207	182	633	1021	4782	(10,20)	45	73	250	358	1314
(11,13)	580	557	2307	2750	14301	(11,20)	123	130	584	879	4331
(12,13)	60	64	394	508	2573	(12,20)	154	137	824	1246	6801
(13,13)	19	17	131	152	701	(13,20)	61	70	392	546	2864
(14,13)	28	25	193	225	1036	(14,20)	63	87	410	439	2594
(15,13)	29	34	197	236	1112	(15,20)	209	155	413	633	2494
(16,13)	35	41	238	284	1435	(16,20)	152	136	913	1012	5052
(17,13)	20	35	83	104	569	(17,20)	82	123	464	580	2916
(18,13)	25	46	96	122	671	(18,20)	23	39	110	142	700
(19,13)	44	81	180	232	1218	(19,20)	43	74	191	249	1221
(20,13)	78	78	181	232	1539	(20,20)	33	56	151	201	1059
(21,13)	5432	4153	3912	1923	10849	(21,20)	590	1071	2644	3574	19791
(22,13)	234	405	1037	1405	7836	(22,20)	1346	2737	6323	8016	44597
(23,13)	553	289	292	419	6163	(23,20)	46	83	212	287	1453
(24,13)	1656	366	904	1335	6867	(24,20)	114	202	587	778	3777
(25,13)	24087	33744	14815	8011	51555	(25,20)	7115	34391	9936	2673	12839
(26,13)	529	698	2657	2545	13847	(26,20)	431	661	2144	2705	12830
(27,13)	499	547	2204	3142	11413	(27,20)	526	751	2719	3833	19155
(28,13)	5126	4611	11755	13461	68791	(28,20)	3728	6082	16071	21218	111410
(29,13)	4802	15948	39786	21936	112575	(29,20)	35740	97652	89071	121233	286631
(30,13)	2008	1779	7502	10371	51663	(30,20)	1260	1751	5855	6083	40351
(31,13)	1744	1891	8434	11303	59543	(31,20)	70	108	339	501	2438
(32,13)	68	152	330	523	2475	(32,20)	0	0	0	0	0
(33,13)	0	0	0	0	0	(33,20)	0	0	0	0	0
(34,13)	0	0	0	0	0	(34,20)	0	0	0	0	0
(35,13)	0	0	0	0	0	(35,20)	0	0	0	0	0
(36,13)	0	0	0	0	0	(36,20)	0	0	0	0	0
(37,13)	0	0	0	0	0	(37,20)	0	0	0	0	0
(38,13)	0	0	0	0	0	(38,20)	0	0	0	0	0
(39,13)	0	0	0	0	0	(39,20)	0	0	0	0	0
(40,13)	0	0	0	0	0	(40,20)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20NM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CC	GRID PT	PART	SO2	NOX	HC	CO
(1,21)	0	0	0	0	0	(1,22)	03	1132	264	24	9
(2,21)	0	0	0	0	0	(2,22)	1	4	3	0	0
(3,21)	923	667	230	12	2	(3,22)	17906	38038	41597	21010	84113
(4,21)	0	0	0	0	0	(4,22)	76	261	285	903	825
(5,21)	0	0	0	0	0	(5,22)	14	13	188	232	1172
(6,21)	47	233	167	100	595	(6,22)	7560	2954	1761	1494	6994
(7,21)	77	203	413	630	2587	(7,22)	8518	12742	43896	32470	173703
(8,21)	468	1235	2513	3051	15730	(8,22)	11180	36006	21315	25453	112131
(9,21)	254	335	689	1055	4343	(9,22)	102	242	564	857	3859
(10,21)	240	37	388	783	3270	(10,22)	60	73	381	571	3440
(11,21)	66	69	417	616	3440	(11,22)	124	109	982	820	4045
(12,21)	28	30	102	269	1500	(12,22)	50	83	301	470	2580
(13,21)	235	274	720	907	5931	(13,22)	300	566	1382	1789	10861
(14,21)	43	102	243	326	2000	(14,22)	18012	11481	7200	1474	8703
(15,21)	129	215	655	893	4814	(15,22)	731	771	2793	2221	12123
(16,21)	59	96	356	446	2392	(16,22)	1414	1486	4825	7088	37451
(17,21)	96	156	507	648	3238	(17,22)	120	109	654	916	4731
(18,21)	143	233	755	3366	4825	(18,22)	194	244	842	1120	5778
(19,21)	47	77	250	319	1525	(19,22)	67	80	259	330	1642
(20,21)	69	124	375	480	2193	(20,22)	99	106	369	432	2079
(21,21)	1459	365	1016	1345	6652	(21,22)	378	166	504	634	3154
(22,21)	8451	17553	13853	10747	64211	(22,22)	124	640	1579	2237	12794
(23,21)	80	135	375	544	2020	(23,22)	17	22	631	351	4496
(24,21)	54	89	308	445	2043	(24,22)	36	57	134	230	951
(25,21)	30	51	160	197	6346	(25,22)	271	57	225	330	1385
(26,21)	293	410	1315	1458	52066	(26,22)	290	324	996	1105	4782
(27,21)	1576	3745	10722	10116	126363	(27,22)	8101	562	1628	2198	11644
(28,21)	6210	29440	20177	24376	459788	(28,22)	28972	9050	22055	31141	158034
(29,21)	13632	100316	123405	119931	512800	(29,22)	32667	69294	108818	122212	502298
(30,21)	29680	96638	138663	146672	56051	(30,22)	11398	62290	123935	121011	475192
(31,21)	3891	5651	22953	14473	56051	(31,22)	50	11753	43745	69400	375081
(32,21)	0	0	0	0	0	(32,22)	0	74	86	54	6
(33,21)	0	0	0	0	0	(33,22)	0	0	0	0	0
(34,21)	0	0	0	0	0	(34,22)	0	0	0	0	0
(35,21)	0	0	0	0	0	(35,22)	0	0	0	0	0
(36,21)	0	0	0	0	0	(36,22)	0	0	0	0	0
(37,21)	0	0	0	0	0	(37,22)	0	0	0	0	0
(38,21)	0	0	0	0	0	(38,22)	0	0	0	0	0
(39,21)	0	0	0	0	0	(39,22)	0	0	0	0	0
(40,21)	0	0	0	0	0	(40,22)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,23)	0	0	0	0	0	(1,24)	0	0	0	0	0
(2,23)	0	0	0	0	0	(2,24)	0	0	0	0	0
(3,23)	565	844	2307	5158	212	(3,24)	1695	3537	3359	8322	17094
(4,23)	0	0	0	0	0	(4,24)	4040	176154	37000	3895	12854
(5,23)	594	1032	2900	3800	27635	(5,24)	0	0	568	804	4029
(6,23)	54356	7272	17339	22518	299490	(6,24)	125	342	1812	3101	10804
(7,23)	2840	6139	10751	16046	68134	(7,24)	896	912	1859	2869	14591
(8,23)	1131	2215	4548	6634	27518	(8,24)	481	846	2158	2399	13497
(9,23)	448	750	1524	2019	10732	(9,24)	993	307	826	1111	6076
(10,23)	103	177	665	1013	5708	(10,24)	866	312	1155	1949	10214
(11,23)	349	227	1159	1586	9472	(11,24)	551	184	787	1350	7039
(12,23)	196	247	992	1569	9112	(12,24)	162	139	755	1397	7613
(13,23)	185	204	661	1084	5261	(13,24)	119	179	12310	1595	8237
(14,23)	118	212	732	732	4202	(14,24)	23112	14631	336	537	2967
(15,23)	540	185	1680	903	4821	(15,24)	56	78	1499	2383	12958
(16,23)	226	239	613	905	4553	(16,24)	350	333	1791	2298	12144
(17,23)	74	109	427	672	3722	(17,24)	126	109	470	740	4353
(18,23)	277	230	1277	1858	9356	(18,24)	3615	2271	8294	11109	52013
(19,23)	632	227	2602	4354	20201	(19,24)	6912	11896	6360	1692	8643
(20,23)	144	227	708	945	4583	(20,24)	277	152	580	818	350
(21,23)	56	88	308	360	1731	(21,24)	107	36	151	233	1279
(22,23)	74	120	378	510	2455	(22,24)	131	119	526	790	4180
(23,23)	121	234	585	857	4113	(23,24)	96	115	577	857	4618
(24,23)	34	42	232	376	1743	(24,24)	553	172	865	1275	6793
(25,23)	241	420	1038	1676	8521	(25,24)	896	2081	2820	4512	24192
(26,23)	3816	35147	11686	1281	5828	(26,24)	1073	1108	3181	4731	25424
(27,23)	248	359	1238	2008	10595	(27,24)	1408	11571	17212	7223	34286
(28,23)	4138	2808	31297	35685	60035	(28,24)	970	1076	4682	6766	34621
(29,23)	4057	3734	18145	31252	12391	(29,24)	6942	27690	15686	18345	76396
(30,23)	2523	2057	12098	13421	89028	(30,24)	106	145	524	900	4116
(31,23)	9757	2712	44774	24307	102004	(31,24)	1974	1126	15113	12359	44449
(32,23)	3751	3668	17400	34630	140078	(32,24)	714	1072	3002	5524	23638
(33,23)	96	13	57	69	110	(33,24)	14	0	44	2	3
(34,23)	0	0	0	0	0	(34,24)	0	0	0	0	0
(35,23)	0	0	0	0	0	(35,24)	0	0	0	0	0
(36,23)	0	0	0	0	0	(36,24)	0	0	0	0	0
(37,23)	0	0	0	0	0	(37,24)	0	0	0	0	0
(38,23)	0	0	0	0	0	(38,24)	0	0	0	0	0
(39,23)	0	0	0	0	0	(39,24)	0	0	0	0	0
(40,23)	0	0	0	0	0	(40,24)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20 NM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,25)	0	0	0	0	0	(1,26)	0	0	0	0	0
(2,25)	0	0	0	0	0	(2,26)	0	0	0	0	0
(3,25)	2920	5640	13628	22288	92206	(3,26)	0	0	0	0	0
(4,25)	13444	41827	46548	40349	229902	(4,26)	728	1777	4414	26648	0
(5,25)	0	0	0	0	0	(5,26)	0	34	39	1	0
(6,25)	0	0	0	0	0	(6,26)	0	0	0	0	0
(7,25)	167	457	759	1075	5365	(7,26)	0	0	0	0	0
(8,25)	135	238	654	1035	5637	(8,26)	138	78	207	1358	0
(9,25)	317	237	1279	2176	11764	(9,26)	20	29	207	1377	6413
(10,25)	1040	1458	1654	2788	12581	(10,26)	183	365	826	1377	105329
(11,25)	9249	24763	30491	26747	80953	(11,26)	10482	31827	44617	38773	11786
(12,25)	653	764	2330	4518	20238	(12,26)	636	551	1991	7031	15947
(13,25)	912	719	2472	5230	21583	(13,26)	395	602	2048	3056	3283
(14,25)	365	462	1277	1944	10299	(14,26)	540	202	492	712	22790
(15,25)	62	30	211	228	1216	(15,26)	791	3038	3526	4411	3691
(16,25)	14434	30797	19934	546	4585	(16,26)	168	114	361	588	1300
(17,25)	340	404	1495	2589	12825	(17,26)	195	239	801	1300	7003
(18,25)	42	71	237	372	2044	(18,26)	38	41	133	199	1120
(19,25)	187	244	728	1080	5649	(19,26)	151	143	555	577	3056
(20,25)	354	228	2153	1016	5128	(20,26)	245	539	1133	1530	8094
(21,25)	31	42	177	201	1554	(21,26)	139	140	663	1096	5752
(22,25)	118	52	291	396	2162	(22,26)	172	130	671	969	5900
(23,25)	42	52	253	384	2193	(23,26)	24	37	125	186	1051
(24,25)	134	153	774	1123	6039	(24,26)	7	9	38	59	325
(25,25)	234	292	1191	1731	9049	(25,26)	42	58	228	347	1810
(26,25)	242	235	895	1331	7279	(26,26)	556	1931	1972	3018	15718
(27,25)	1644	1372	42035	8837	41523	(27,26)	1168	1603	7825	9693	46758
(28,25)	453	499	2174	3757	16325	(28,26)	604	367	1512	2076	10539
(29,25)	771	998	4810	6619	32102	(29,26)	398	796	2048	3110	13676
(30,25)	618	937	3092	5136	23729	(30,26)	376	753	1954	3054	14797
(31,25)	5421	44324	30464	24634	112503	(31,26)	1527	6446	16045	26191	120150
(32,25)	10	12	50	103	444	(32,26)	0	6570	7229	10999	50447
(33,25)	179	135	444	1065	3205	(33,26)	0	172	828	1704	7253
(34,25)	229	221	1082	2168	9355	(34,26)	6	1	13	1	1
(35,25)	1	0	0	24	0	(35,26)	0	0	1	0	0
(36,25)	0	0	0	0	0	(36,26)	0	0	0	0	0
(37,25)	0	0	0	0	0	(37,26)	0	0	0	0	0
(38,25)	0	0	0	0	0	(38,26)	0	0	0	0	0
(39,25)	0	0	0	0	0	(39,26)	0	0	0	0	0
(40,25)	0	0	0	0	0	(40,26)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1.27)	0	0	0	0	0	(1.28)	0	0	0	0	0
(2.27)	0	0	0	0	0	(2.28)	0	0	0	0	0
(3.27)	0	0	0	0	0	(3.28)	0	0	0	0	0
(4.27)	0	0	0	0	0	(4.28)	0	0	0	0	0
(5.27)	0	0	0	0	0	(5.28)	0	0	0	0	0
(6.27)	0	0	0	0	0	(6.28)	0	0	0	0	0
(7.27)	0	0	0	0	0	(7.28)	0	0	0	0	0
(8.27)	0	0	0	0	0	(8.28)	0	0	0	0	0
(9.27)	0	0	0	0	0	(9.28)	0	0	0	0	0
(10.27)	0	0	0	0	0	(10.28)	0	0	0	0	0
(11.27)	0	0	0	0	0	(11.28)	0	0	0	0	0
(12.27)	0	0	0	0	0	(12.28)	0	0	0	0	0
(13.27)	0	0	0	0	0	(13.28)	0	0	0	0	0
(14.27)	0	0	0	0	0	(14.28)	0	0	0	0	0
(15.27)	0	0	0	0	0	(15.28)	0	0	0	0	0
(16.27)	0	0	0	0	0	(16.28)	0	0	0	0	0
(17.27)	0	0	0	0	0	(17.28)	0	0	0	0	0
(18.27)	0	0	0	0	0	(18.28)	0	0	0	0	0
(19.27)	0	0	0	0	0	(19.28)	0	0	0	0	0
(20.27)	0	0	0	0	0	(20.28)	0	0	0	0	0
(21.27)	0	0	0	0	0	(21.28)	0	0	0	0	0
(22.27)	0	0	0	0	0	(22.28)	0	0	0	0	0
(23.27)	0	0	0	0	0	(23.28)	0	0	0	0	0
(24.27)	0	0	0	0	0	(24.28)	0	0	0	0	0
(25.27)	0	0	0	0	0	(25.28)	0	0	0	0	0
(26.27)	0	0	0	0	0	(26.28)	0	0	0	0	0
(27.27)	0	0	0	0	0	(27.28)	0	0	0	0	0
(28.27)	0	0	0	0	0	(28.28)	0	0	0	0	0
(29.27)	0	0	0	0	0	(29.28)	0	0	0	0	0
(30.27)	0	0	0	0	0	(30.28)	0	0	0	0	0
(31.27)	0	0	0	0	0	(31.28)	0	0	0	0	0
(32.27)	0	0	0	0	0	(32.28)	0	0	0	0	0
(33.27)	0	0	0	0	0	(33.28)	0	0	0	0	0
(34.27)	0	0	0	0	0	(34.28)	0	0	0	0	0
(35.27)	0	0	0	0	0	(35.28)	0	0	0	0	0
(36.27)	0	0	0	0	0	(36.28)	0	0	0	0	0
(37.27)	0	0	0	0	0	(37.28)	0	0	0	0	0
(38.27)	0	0	0	0	0	(38.28)	0	0	0	0	0
(39.27)	0	0	0	0	0	(39.28)	0	0	0	0	0
(40.27)	0	0	0	0	0	(40.28)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,29)	0	0	0	0	0	(1,30)	0	0	0	0	0
(2,29)	0	0	0	0	0	(2,30)	0	0	0	0	0
(3,29)	0	0	0	0	0	(3,30)	0	0	0	0	0
(4,29)	0	0	0	0	0	(4,30)	0	0	0	0	0
(5,29)	0	0	0	0	0	(5,30)	0	0	0	0	0
(6,29)	0	0	0	0	0	(6,30)	0	0	0	0	0
(7,29)	0	0	0	0	0	(7,30)	0	0	0	0	0
(8,29)	0	0	0	0	0	(8,30)	0	0	0	0	0
(9,29)	0	0	0	0	0	(9,30)	0	0	0	0	0
(10,29)	0	0	0	0	0	(10,30)	0	0	0	0	0
(11,29)	0	0	0	0	0	(11,30)	0	0	0	0	0
(12,29)	0	0	0	0	0	(12,30)	0	0	0	0	0
(13,29)	0	0	0	0	0	(13,30)	0	0	0	0	0
(14,29)	1734	6406	5037.3	4117	16439	(14,30)	147	276	607	1033	4935
(15,29)	3631	373	133.2	1702	8192	(15,30)	10	19	52	88	425
(16,29)	30	167	146	758	3653	(16,30)	142	214	502	730	3934
(17,29)	117	148	881	717	3538	(17,30)	969	2364	1447	4037	22941
(18,29)	848	679	208.4	3319	1627	(18,30)	839	872	2175	3245	16165
(19,29)	3045	2230	5557	8294	4034.9	(19,30)	502	546	1672	2546	13104
(20,29)	271	310	500	1548	774.2	(20,30)	195	265	879	1130	6389
(21,29)	55	72	22.4	322	1765	(21,30)	220	194	627	923	4479
(22,29)	95	116	61.0	878	5900	(22,30)	76	132	413	646	3605
(23,29)	388	766	1135	1454	9135	(23,30)	555	691	1631	1858	8834
(24,29)	34	67	18.4	729	1707	(24,30)	12441	23757	24642	14155	61742
(25,29)	75	101	430	597	3030	(25,30)	173	204	319	1331	7535
(26,29)	416	577	2117	3177	17775	(26,30)	572	1235	2657	4149	18799
(27,29)	281	2521	2695	633	4441	(27,30)	333	1094	645	561	2323
(28,29)	168	236	702	1125	5007	(28,30)	78	563	137	156	512
(29,29)	105	168	517	717	3705	(29,30)	20135	33090	24832	20316	81551
(30,29)	263	407	1301	2041	945	(30,30)	1318	2853	6192	7679	42797
(31,29)	3287	12592	16669	20456	90001	(31,30)	4504	1097	2286	8576	13218
(32,29)	335	446	1910	2687	13714	(32,30)	179	271	959	1223	5892
(33,29)	364	828	179.4	2241	10653	(33,30)	213	330	1104	1428	6893
(34,29)	433	1215	2849	3113	13948	(34,30)	151	179	554	948	4393
(35,29)	539	831	1374	3334	14424	(35,30)	913	1975	3685	6501	26313
(36,29)	60	59	208	372	1664	(36,30)	0	0	0	0	0
(37,29)	0	0	0	0	0	(37,30)	0	0	0	0	0
(38,29)	0	0	0	0	0	(38,30)	0	0	0	0	0
(39,29)	0	0	0	0	0	(39,30)	0	0	0	0	0
(40,29)	0	0	0	0	0	(40,30)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,31)	0	0	0	0	0	(1,32)	0	0	0	0	0
(2,31)	0	0	0	0	0	(2,32)	0	0	0	0	0
(3,31)	0	0	0	0	0	(3,32)	0	0	0	0	0
(4,31)	0	0	0	0	0	(4,32)	0	0	0	0	0
(5,31)	0	0	0	0	0	(5,32)	0	0	0	0	0
(6,31)	0	0	0	0	0	(6,32)	0	0	0	0	0
(7,31)	0	0	0	0	0	(7,32)	0	0	0	0	0
(8,31)	0	0	0	0	0	(8,32)	0	0	0	0	0
(9,31)	0	0	0	0	0	(9,32)	0	0	0	0	0
(10,31)	0	0	0	0	0	(10,32)	0	0	0	0	0
(11,31)	0	0	0	0	0	(11,32)	0	0	0	0	0
(12,31)	0	0	0	0	0	(12,32)	0	0	0	0	0
(13,31)	0	0	0	0	0	(13,32)	0	0	0	0	0
(14,31)	3	2	1	0	0	(14,32)	103	178	580	981	4798
(15,31)	125	178	613	1031	5043	(15,32)	520	818	2185	4096	18909
(16,31)	14	30	71	105	521	(16,32)	123	144	396	985	2244
(17,31)	19	41	93	134	675	(17,32)	203	234	469	208	990
(18,31)	118	296	296	544	2316	(18,32)	3	6	14	22	111
(19,31)	26	40	104	149	741	(19,32)	0	0	0	0	0
(20,31)	16	29	83	135	714	(20,32)	1	2	0	0	0
(21,31)	8	14	45	77	414	(21,32)	4	6	26	34	118
(22,31)	477	626	2079	3250	17268	(22,32)	41	67	225	116	406
(23,31)	503	772	2134	3121	16560	(23,32)	389	155	500	430	2149
(24,31)	1863	2882	7523	12467	59398	(24,32)	589	540	2500	785	4021
(25,31)	2494	3904	9650	14532	60079	(25,32)	226	280	1026	4136	17052
(26,31)	720	817	3166	6161	28563	(26,32)	306	465	1135	1421	7123
(27,31)	909	4834	3376	4553	20100	(27,32)	924	3357	2957	2305	6978
(28,31)	93	154	344	573	2478	(28,32)	77	112	217	4260	18329
(29,31)	264	326	1026	1768	6719	(29,32)	487	857	373	373	1500
(30,31)	7613	34938	17027	25737	70694	(30,32)	5202	4526	2714	2714	10750
(31,31)	850	2479	3195	5129	21361	(31,32)	295	1302	2878	2971	12341
(32,31)	619	676	1309	2477	9507	(32,32)	3914	2884	634	2052	3360
(33,31)	414	628	1726	2372	10749	(33,32)	2034	3452	3367	4474	18143
(34,31)	285	557	1183	1744	8105	(34,32)	1766	2942	4291	6399	25813
(35,31)	4134	9395	16722	33330	117858	(35,32)	7228	17313	5227	8012	37041
(36,31)	1245	2780	5511	9204	41832	(36,32)	3038	93905	22443	32712	119335
(37,31)	123	134	361	754	3123	(37,32)	2391	11143	36174	15716	40487
(38,31)	1	0	0	2	6	(38,32)	146	348	10350	17757	44842
(39,31)	3	0	0	5	15	(39,32)	73	91	641	1015	4157
(40,31)	0	0	0	0	0	(40,32)	0	0	177	325	1247

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,33)	0	0	0	0	0	(1,34)	0	0	0	0	0
(2,33)	0	0	0	0	0	(2,34)	0	0	0	0	0
(3,33)	0	0	0	0	0	(3,34)	0	0	0	0	0
(4,33)	0	0	0	0	0	(4,34)	0	0	0	0	0
(5,33)	0	0	0	0	0	(5,34)	0	0	0	0	0
(6,33)	0	0	0	0	0	(6,34)	0	0	0	0	0
(7,33)	0	0	0	0	0	(7,34)	0	0	0	0	0
(8,33)	0	0	0	0	0	(8,34)	0	0	0	0	0
(9,33)	0	0	0	0	0	(9,34)	0	0	0	0	0
(10,33)	0	0	0	0	0	(10,34)	0	0	0	0	0
(11,33)	0	0	0	0	0	(11,34)	0	0	0	0	0
(12,33)	0	0	0	0	0	(12,34)	0	0	0	0	0
(13,33)	56	95	301	534	2718	(13,34)	0	0	0	0	0
(14,33)	58	99	293	530	2601	(14,34)	42	69	213	389	1905
(15,33)	399	289	1352	1072	5277	(15,34)	51	87	236	344	1695
(16,33)	71419	284	793	1071	5297	(16,34)	61	30	60	86	420
(17,33)	11	24	56	76	385	(17,34)	3	7	12	19	94
(18,33)	4	6	17	28	148	(18,34)	12	22	61	100	531
(19,33)	3	4	19	35	295	(19,34)	4	5	23	102	350
(20,33)	3	11	51	230	804	(20,34)	10	12	55	239	835
(21,33)	3	10	45	206	721	(21,34)	3	0	0	11	0
(22,33)	5	8	26	41	211	(22,34)	12	26	56	90	421
(23,33)	449	160	1235	788	3824	(23,34)	27	49	104	144	725
(24,33)	483	458	1814	3735	10646	(24,34)	725	413	1598	1521	7560
(25,33)	140	185	604	4255	3864	(25,34)	44	76	227	322	1667
(26,33)	198	170	805	4248	4878	(26,34)	23	89	443	544	2710
(27,33)	62	58	313	426	1948	(27,34)	277	258	1422	1938	8858
(28,33)	23	39	74	122	496	(28,34)	56	228	97	368	308
(29,33)	127	860	824	1226	4979	(29,34)	423	1050	476	1242	4774
(30,33)	97	206	379	602	2484	(30,34)	156	204	261	760	1888
(31,33)	351	820	614	1347	4258	(31,34)	1007	4172	3665	5268	17220
(32,33)	1323	5760	7214	10338	44607	(32,34)	2592	7432	7846	8939	37446
(33,33)	2783	5138	6626	9879	41152	(33,34)	57	132	216	644	1617
(34,33)	2259	4715	3108	16538	65032	(34,34)	6179	13185	22094	56548	148183
(35,33)	3312	7757	14742	25303	101493	(35,34)	8100	26184	30761	56882	230232
(36,33)	1062	2624	4983	8652	37383	(36,34)	3444	2832	7136	12704	54331
(37,33)	234	319	834	1772	6581	(37,34)	315	553	1428	2573	11037
(38,33)	1351	31662	9343	1361	5079	(38,34)	15	29	75	132	573
(39,33)	357	850	1558	7453	10074	(39,34)	104	150	285	506	1568
(40,33)	0	0	0	0	0	(40,34)	151	361	661	1046	4277

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	S02	NOX	HC	CO	GRID PT	PART	S02	NOX	HC	CO
(1,35)	0	0	0	0	0	(1,36)	0	0	0	0	0
(2,35)	0	0	0	0	0	(2,36)	0	0	0	0	0
(3,35)	0	0	0	0	0	(3,36)	0	0	0	0	0
(4,35)	0	0	0	0	0	(4,36)	0	0	0	0	0
(5,35)	0	0	0	0	0	(5,36)	0	0	0	0	0
(6,35)	0	0	0	0	0	(6,36)	0	0	0	0	0
(7,35)	0	0	0	0	0	(7,36)	0	0	0	0	0
(8,35)	0	0	0	0	0	(8,36)	0	0	0	0	0
(9,35)	0	0	0	0	0	(9,36)	0	0	0	0	0
(10,35)	0	0	0	0	0	(10,36)	0	0	0	0	0
(11,35)	0	0	0	0	0	(11,36)	0	0	0	0	0
(12,35)	0	0	0	0	0	(12,36)	0	0	0	0	0
(13,35)	0	0	0	0	0	(13,36)	0	0	0	0	0
(14,35)	43	111	201	315	1532	(14,36)	1259	552	1103	1590	7624
(15,35)	165	278	598	788	3826	(15,36)	289	352	784	1105	5328
(16,35)	44	102	182	283	1383	(16,36)	93	145	390	405	1970
(17,35)	213	73	624	231	1016	(17,36)	2	5	14	14	70
(18,35)	2	6	12	18	88	(18,36)	11	14	54	100	476
(19,35)	6	8	37	165	579	(19,36)	128	104	443	658	3049
(20,35)	0	0	0	0	0	(20,36)	68	250	107	116	582
(21,35)	25	20	78	234	916	(21,36)	2	4	11	26	124
(22,35)	4	4	13	0	0	(22,36)	34	60	88	169	820
(23,35)	53	55	238	318	1858	(23,36)	1874	2860	1703	1316	5992
(24,35)	161	162	723	844	4177	(24,36)	297	275	1276	1700	7614
(25,35)	197	63	284	356	1505	(25,36)	446	118	369	637	1925
(26,35)	53	52	307	424	1934	(26,36)	191	152	976	1383	6275
(27,35)	134	95	525	716	3276	(27,36)	36	160	165	215	763
(28,35)	84	58	106	171	666	(28,36)	105	460	114	139	387
(29,35)	460	844	1653	2477	9786	(29,36)	11	72	48	63	283
(30,35)	187	243	460	820	3534	(30,36)	169	561	487	640	2623
(31,35)	234	246	460	801	2998	(31,36)	623	2053	1980	2744	10037
(32,35)	592	1220	1685	2572	9704	(32,36)	1559	2779	3128	10305	17970
(33,35)	1453	1866	784	3252	1714	(33,36)	1147	5881	2982	2816	9641
(34,35)	9594	35718	49805	63674	256571	(34,36)	1407	6016	5916	8707	37488
(35,35)	7228	34083	44806	36378	129112	(35,36)	34093	15138	20707	18602	77783
(36,35)	205	418	1012	1741	7559	(36,36)	0	0	0	0	0
(37,35)	23	46	117	208	980	(37,36)	0	0	0	0	0
(38,35)	103	85	174	373	1348	(38,36)	0	0	0	0	0
(39,35)	120	107	216	441	1620	(39,36)	0	0	0	0	0
(40,35)	35	63	152	241	985	(40,36)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20MM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,37)	0	0	0	0	0	(1,38)	0	0	0	0	0
(2,37)	0	0	0	0	0	(2,38)	0	0	0	0	0
(3,37)	0	0	0	0	0	(3,38)	0	0	0	0	0
(4,37)	0	0	0	0	0	(4,38)	0	0	0	0	0
(5,37)	0	0	0	0	0	(5,38)	0	0	0	0	0
(6,37)	0	0	0	0	0	(6,38)	0	0	0	0	0
(7,37)	0	0	0	0	0	(7,38)	0	0	0	0	0
(8,37)	0	0	0	0	0	(8,38)	0	0	0	0	0
(9,37)	0	0	0	0	0	(9,38)	0	0	0	0	0
(10,37)	0	0	0	0	0	(10,38)	0	0	0	0	0
(11,37)	0	0	0	0	0	(11,38)	18	159	30	5	8
(12,37)	0	0	0	0	0	(12,38)	52	475	74	15	25
(13,37)	0	0	0	0	0	(13,38)	0	0	0	0	0
(14,37)	13	34	61	35	465	(14,38)	14	4	1390	1667	7899
(15,37)	135	228	403	637	3108	(15,38)	1400	974	615	960	4676
(16,37)	240	215	545	82	3019	(16,38)	231	340	225	398	1896
(17,37)	11	29	52	82	398	(17,38)	46	58	6	11	64
(18,37)	7	8	32	59	282	(18,38)	2	2	13	24	114
(19,37)	114	119	443	829	3961	(19,38)	3	37	33	166	773
(20,37)	65	77	320	519	2505	(20,38)	22	70	250	473	2293
(21,37)	16	26	90	174	842	(21,38)	46	55	219	385	1817
(22,37)	88	163	486	913	4401	(22,38)	201	169	815	997	4029
(23,37)	162	143	713	981	4323	(23,38)	140	111	709	1014	4581
(24,37)	66	58	295	402	1793	(24,38)	209	53	346	588	1957
(25,37)	65	52	332	471	2137	(25,38)	99	79	508	719	1264
(26,37)	107	91	543	763	3469	(26,38)	552	1088	2023	2731	11594
(27,37)	107	6	16	253	96	(27,38)	125	196	459	630	2692
(28,37)	51	130	40	76	216	(28,38)	58	178	212	264	1129
(29,37)	68	95	222	316	1264	(29,38)	345	568	1020	7146	5672
(30,37)	183	916	702	972	3021	(30,38)	104	213	385	520	2203
(31,37)	1168	50835	29854	3909	14845	(31,38)	249	40	141	512	312
(32,37)	193	314	587	882	3387	(32,38)	1057	40108	9091	5380	8343
(33,37)	463	748	1439	2341	9786	(33,38)	162	192	427	642	2410
(34,37)	1410	2897	5747	10022	41671	(34,38)	0	0	0	0	0
(35,37)	935	2121	4219	6470	30364	(35,38)	0	0	0	0	0
(36,37)	0	0	0	0	0	(36,38)	0	0	0	0	0
(37,37)	0	0	0	0	0	(37,38)	0	0	0	0	0
(38,37)	0	0	0	0	0	(38,38)	0	0	0	0	0
(39,37)	0	0	0	0	0	(39,38)	0	0	0	0	0
(40,37)	0	0	0	0	0	(40,38)	0	0	0	0	0

ANNUAL EMISSION RATES (TONS/YEAR)
FOR THE 40 BY 40 US-CANADIAN GRID
(GRID SPACING = 20KM)

TOTAL SOURCE EMISSIONS

GRID PT	PART	SO2	NOX	HC	CO	GRID PT	PART	SO2	NOX	HC	CO
(1,39)	0	0	0	0	0	(1,40)	0	0	0	0	0
(2,39)	0	0	0	0	0	(2,40)	0	0	0	0	0
(3,39)	0	0	0	0	0	(3,40)	0	0	0	0	0
(4,39)	0	0	0	0	0	(4,40)	0	0	0	0	0
(5,39)	0	0	0	0	0	(5,40)	0	0	0	0	0
(6,39)	0	0	0	0	0	(6,40)	0	0	0	0	0
(7,39)	0	0	0	0	0	(7,40)	0	0	0	0	0
(8,39)	0	0	0	0	0	(8,40)	0	0	0	0	0
(9,39)	0	0	0	0	0	(9,40)	0	0	0	0	0
(10,39)	0	0	0	0	0	(10,40)	0	0	0	0	0
(11,39)	73	557	189	17	22	(11,40)	0	0	0	0	0
(12,39)	355	7166	2083	226	308	(12,40)	0	0	0	0	0
(13,39)	0	0	0	0	0	(13,40)	0	0	0	0	0
(14,39)	0	0	0	0	0	(14,40)	0	0	0	0	0
(15,39)	49	26	47	73	352	(15,40)	0	0	0	0	0
(16,39)	3165	542	251	255	1307	(16,40)	0	0	0	0	0
(17,39)	105	124	502	882	4182	(17,40)	33	30	119	147	682
(18,39)	82	38	395	634	3292	(18,40)	60	68	155	290	1336
(19,39)	36	61	147	240	1132	(19,40)	4434	669	2107	2666	11752
(20,39)	111	1107	349	770	1321	(20,40)	775	907	3682	5410	24815
(21,39)	106	210	461	811	3793	(21,40)	110	118	503	731	2862
(22,39)	332	170	1183	2566	6852	(22,40)	605	520	3075	4253	19163
(23,39)	115	117	580	753	3328	(23,40)	445	414	2281	3001	13434
(24,39)	114	105	582	805	3535	(24,40)	46	25	159	246	1114
(25,39)	43	40	260	373	1687	(25,40)	1711	1124	4949	7759	29182
(26,39)	41	32	218	314	1432	(26,40)	242	72	172	260	865
(27,39)	60	112	254	338	1538	(27,40)	214	111	285	326	1451
(28,39)	100	131	309	447	1771	(28,40)	95	175	366	496	2159
(29,39)	376	999	1442	1833	8145	(29,40)	259	483	958	1317	5620
(30,39)	353	695	1093	1601	6456	(30,40)	446	938	1858	2481	11115
(31,39)	52	68	140	195	871	(31,40)	441	1033	1847	3033	10994
(32,39)	171	657	348	682	1374	(32,40)	992	706	1360	1996	8328
(33,39)	607	1419	1668	2877	9773	(33,40)	33	50	162	232	1005
(34,39)	113	175	569	916	3532	(34,40)	0	0	0	0	0
(35,39)	0	0	0	0	0	(35,40)	0	0	0	0	0
(36,39)	0	0	0	0	0	(36,40)	0	0	0	0	0
(37,39)	0	0	0	0	0	(37,40)	0	0	0	0	0
(38,39)	0	0	0	0	0	(38,40)	0	0	0	0	0
(39,39)	0	0	0	0	0	(39,40)	0	0	0	0	0
(40,39)	0	0	0	0	0	(40,40)	0	0	0	0	0